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Results of High Cultivation.

During the late grand *Exposition Universelle* of the Industry of France, at Paris, a commission was appointed to examine and report upon agricultural productions, and the agriculture of England, Scotland and Ireland. M. LEONCE DE LAVERGNE, the gentleman who was put at the head of the commission, appears to have been singularly well qualified for the task, to have undertaken it on the most enlarged sense, and to have combined in his report results that bear evidence of great practical knowledge and much sound philosophical deduction from the observations he was enabled to make during his visit to Great Britain. His full report has not yet been published in English, but in the Messrs. Scott & Co.'s reprint of the Edinburgh Quarterly Review for January, we find a very excellent synopsis, from which we cull some facts relative to the comparative products of agriculture in England and France, which we think our subscribers will read with much satisfaction.

It appears from this report that England alone contains about 32½ millions of acres of land under cultivation; and while France, in the northern half alone, contains 55 millions of acres, which in soil, in climate, and in variety of production, possesses advantages far superior to those enjoyed by Great Britain, yet the superior system pursued by the agriculturists of the latter country enables them to make the 32½ millions of acres produce nearly double the amount in money value to that returned by the 55 millions of the northern half of France. The writer exclaims, while comparing the advantages of his own country with that of her neighbor:

"How superior are the soil and climate of France! In comparing with England, not the fourth only, but the north-west half of France, say the thirty-six departments grouped around Paris, we find 55 millions of acres, that surpass in quality, as they do in extent, the 32½ millions of acres of England. Scarcely any mountains, few marshes, extensive plains, sound throughout; a soil sufficiently deep,

and of a nature most favorable to production, rich deposits in the broad valleys of the Seine and the Loire and their tributaries; a climate not so moist, but warmer, more favorable for ripening the cereal crops; all the productions of England obtained withless trouble and more certainty, besides in addition, other valuable products, such as sugar, textile and oleaginous plants, tobacco, wine, fruits, &c."

Great Britain, on the contrary, is confined to the production of two roots—the potato and turnip,—two spring crops—barley and oats—one winter crop—wheat. These with pasture or meadow land for the production of grasses on a large scale to furnish food on which may be grown within the smallest limit, the largest possible amount of meat, are nearly the whole range of British agricultural productions. Probably nothing will furnish a better illustration of the difference between the skill employed in the agriculture of the two countries, than the quantity and quality of the sheep. England and France each possess about equal numbers of this animal, to wit: about 35,000,000; but in Great Britain and Ireland, this number of sheep live upon 77½ millions of acres, while in France they cover 132½ millions of acres. Nor is this difference confined to the mere numbers of animals, and of acres; on the contrary, when we compare the production of wool and meat, we find the difference as nearly as six to one, when compared by the acre. The amount of wool both as to quantity and money value is estimated as nearly alike, being about 131,250,000 pounds, valued at about $40,000,000; but when the amount and value of the meat is compared, we see the difference; the thirty-five millions of French sheep producing but 315,000,000 pounds of meat, or only nine pounds per head; while the sheep of great Britain give an aggregate of 7,875,000,000 pounds of meat, or about 22½ pounds per head; and this it will be borne in mind is from only an acre and a quarter; while in France there is an allowance of 3¾ acres to each head. M. Lavergne, therefore admits that the products of a sheep farm in Great Britain compared with that of France, are as 6 to 1. Are not such facts of value to our American farmers, and especially to those of Michigan, who are, in comparison with some of the sheep raising States, close to the great consuming market. And may it not be worth their while to consider the advantage of turning their attention to raising mutton instead of wool as a great staple?

In cattle, the difference between the two countries is equally as great as it is in sheep France has 10,000,000 of head of cattle; Great Britain and Ireland have only 8,000,000; each country having the number of acres under cultivation enumerated above. But the cattle of France, according to official statistics, furnish only an average of 164 pounds of meat to each of the 4,000,000 that are annually slaughtered, while the two millions annually killed in Great Britain, furnish an average of 547 pounds to each head. With respect to swine, also, the advantage is solely with Great Britain; France having no breed of hogs to compare with those of Essex, Suffolk, Leicester, or Berkshire.

The remarks and deductions of the commissioners relative to the grain crops of Great Britain, and of his own country, are so applicable here, that we quote them entire, observing at the same time that where the word *hectare* occurs, it must be understood to mean two and a half acres of our measure. He says:

'With us (in France) the average production is thirteen and one-half bushels of wheat and eleven of rye per acre, deducting seed. Adding to this maize and buckwheat, and dividing the whole by the number of hectares sown, the average result for each acre is rather more than seven bushels of wheat, about three bushels of rye, and a little more than one bushel of maize or buckwheat—making a total of about twelve bushels per acre. In England the production is twenty-eight bushels of wheat—say more than double in quantity, and in money value, three times as much. This superiority is certainly not to be attributed, as in the case of the artificial meadows and roots—and, to a certain extent, also with oats and barley—to the soil and climate, but to superior cultivation, which shows itself chiefly in limiting the wheat crop to the extent of land rendered fit for its production.

'Scotland and Ireland are included in the above estimate; but taking England by itself, the results are much more striking. That small country, which is no larger than a fourth of France, alone produces thirteen million quarters of wheat, six of barley, and twelve of oats. If France produced in the same ratio, her yield, deducting seed, would be fifty million quarters of wheat, and seventy of barley, oats, and other grain—equal to at least double her present production; and we ought to obtain more, considering the nature of our soil and climate, both much more favorable to cereals than the soil and climate of England. These facts verify this agricultural law—that, to reap largely of cereals, it is better *to reduce than to extend the breadth of land sown*; and by giving the greatest space to forage crops, not only is a greater quantity of butcher-meat, milk, and wool obtained, but a larger production of corn also. France will achieve similar results when she has covered her immense fallows with root and forage crops, and reduced the breadth of her cereals by several millions of hectares.'

If we follow these calculations into the gross produce and returns of the agriculture of the two countries, we find that

'France, taken as a whole, produces 100 francs per hectare, England proper produces 200. The animal produce alone of an English farm is equal to at least the total produce of a French farm of equal area—all the vegetable production being additional. Taking only the three principal kinds of domestic animals—sheep, oxen, and pigs—and not taking poultry into account, the English obtain from these four times more than we do in butcher-meat, milk, and wool. Among the vegetable produts, whilst the French soil does not produce quite one hectolitre and a half of wheat per hectare,

the English soil produces three, and it gives, besides, five times more potatoes for human consumption

'By the census of 1841, the total population of the United Kingdom was 27,000,000 of souls, and that of France, 34,000,000. Thus, while the United Kingdom maintained nearly one head per hectare, France maintained only one per hectare and a half.'

From such facts as these the farmers of Michigan may gather something of a knowledge of what the effects are of pursuing steadily a well devised system of rotation of crops, correct principles of breeding, and above all, the influence that liberal institutions have upon promoting agriculture.

The Country around Grand Traverse Bay, Mich.

Mr. Editor:—Being a citizen of this country, I feel quite willing to answer Mr. Pennington's inquiries respecting it; and for confirmation I refer him to Mr. Thomas Patterson, who came here from Lenawee county, nearly two years since.

1. The coast around this bay is not far from 200 miles, and there remains a great extent of the shore of Lake Michigan unsettled. Perhaps 250 miles of coast, south from Mackinac, remains unclaimed; and through this extent every farm may be bounded and washed by the waters of the Lake. Back from the beach nearly all the land remains unappropriated, except that on which pine timber grows. Of course, where not one-fifth is claimed, there are numerous locations as good as any there are. At present, however, only the east side of the east Bay, and up on that side to Mackinac, is in market; the land between the west Bay and Lake Michigan having been withdrawn from sale, by order of the President, to give the Indians, (with whom a new treaty was formed last summer,) a chance to select homes. The land that is now in market may be entered under the graduation law at one dollar per acre; and when the Peninsula comes into market, which will be next summer, it will be at ten shillings per acre, unless Congress should change the price at the present session. No person can miss finding first rate farming land, either in market or on the Peninsula.

2. Mr. Ladd raised at least 25 bushels of wheat per acre this summer on old Indian clearing. Corn, rye, beans, &c., grow as well here as in southern Mich., and for oats and potatoes this region is unrivalled. But so far as experience goes, I consider it poor grass land. Timothy seldom brings a ton per acre, and clover has scarcely been tried. What effect plaster, which may be obtained from Grand Rapids, and other manures, will have on grasses, remains to be determined, none having been used as yet. Blue grass and pigeon grass are rather annoying on my farm, and other grasses may possibly succeed on trial, as there is more clay in the soil than elsewhere. The Indian apple trees, and some peach trees bear every year. The woods are full of raspberries and blackberries every season. Last year the strawberries were destroyed by frost.

3. Last spring was the most backward remembered by the white settlers in 14 years. Everything remained stunted till after the first of June; and the late frosts, (about the 11th of May) killed a few delicate plants. The whole summer was unusually cold, with rain about once a week; and on the 20th of September the Equinoctial storm set in, and blowed almost unremittedly, accompanied with rain every two, or at most, three days, till snow began to fall in November. Last autumn the first killing frost came nearly a month earlier than usual, on the 21, 22, 24 and 25 of September; the year previous it came on the 19th of October. Last year the first killing frost came May 11th; but the year previous there was no killing frost after May 1st. To be uniformly safe, an old settler, (Rev. Dougherty) says every crop injured by frost should be gathered before the middle of September.

4. So soon as the air gets cold enough in November to freeze vapor, and before the ground freezes, or ice forms on water, snow begins to fall, but melts and sinks into the ground in a few days; and it is not till some time in December, year before last not till near the middle of January, that sleighing becomes good; and may then last till near the end of March, without any interruption. From all I can learn, two months may be safely calculated on, and sometimes three. The Bay is not usually closed with ice till the first of February, and the ice is said to become usually only 6 to 8 inches thick; while some winters there is no ice formed on the Bay. The last summer and autumn being unusually cold, ice formed about the 10th of January, and it is now about 20 inches thick; the preceding winter it became about 13 inches thick. Fahrenheit's Thermometer, one morning near the middle of last January, stood 24 degrees below zero, another morning 22 degrees, and some other mornings 15 to 18 degrees below zero. The lowest last winter was 16, and the winter preceding that 7 degrees below zero. From what has been stated, Mr. Pennington may infer that the growing season—the season free from frost—is generally longer here than in the southern tier of counties in Michigan, where I resided since 1832 till 1854; and the cold seldom becomes as intense here as it does there every winter. But to this he must offset the tremendous snow storms which recur three or four times during the winter, and last about 24 hours This winter we have had only two as yet, last winter four. The snow that falls during one of these storms seldom exceeds 6 inches in depth; but the atmosphere is so densely filled that you can scarcely see ten rods before you, and no animal ought to be exposed to one of them; though most Indian ponies get their living in the woods all winter, and some horned animals have occasionally survived the winter, it is said, without being fed or sheltered.

The reason why this region is more temperate than

southern Michigan, is easily understood when its relative position with Lake Michigan is considered. It is a philosophical fact that a given quantity or weight of water diminishes in volume, when cooled, till it arrives at thirty-nine and four tenths (39°.4) of Fahrenheit's Thermometer. The surface water of any deep lake, therefore, sinks as it cools in winter, while the warmer water rises to the surface from below, for the same reason that a stone sinks and a cork rises in water; and the lake cannot, consequently, freeze over till all the water in it cools down to thirty-two (32°) degrees; for when the whole body of water has cooled to 39°.4, that which is then on the surface expands again, and becoming consequently lighter than the water below, remains on the surface and is congealed into ice at 32°. This applies to water in a state of ordinary quiescence; but in a large lake, much agitated by the winds, the water driven against the shore may freeze while in the form of spray, but the ice thus formed disappears again, as soon as the storm permits the warmer water to come in contact with it. Now Lake Michigan is said to be sixteen hundred feet deep, and its waters never all cool down to 32° —it therefore never freezes over; and so long as it is warmer than the atmosphere, the water must necessarily warm the air. Hence it is evident that the more the water of the lakes is warmed in summer, the earlier and thicker will the ice be formed in the shallower Bays, and along the shore of Lake Michigan. I subjoin this explanation here, because in the September number of the *Farmer*, Ralph or the devil made bad work with my manuscript.

5. There are no openings, such as are so called in southern Michigan, in this region. It is covered with a dense forest of Rock (hard) Maple, Beech, Ash, Hemlock, a few Black Oak, Basswood and Pine, Yellow Cedar, and Tamarack, as far as I know. There are very extensive saw-mills on the main land, and the owners of these have purchased all the pine land near the Bay, and ship the lumber to ports on Lake Michigan. The Maple and Beech are now chopped into cordwood, which can be readily sold for from nine to ten shillings anywhere on the beach, and the demand can never be supplied.

6. Hay marshes are very scarce, and have a hard bottom for as I know. There are a number of lakes on the main land, some 20 miles long, and three or four small ones on this Peninsula, which is only from one to two miles broad. Around some of these lakes are swamps of small extent; and in other places there are a kind of swails, called Cedar swamps, resembling the Tamarack swamps south.

7. In addition to the crops already mentioned, field peas and all kinds of root crops do well; and I cannot avoid thinking that this will be a great fruit country, and that every kind of vegetable will succeed as well here as in southern Michigan. My reasons for thinking so, are:—That the ground is not frozen in winter; the surface soil is so porous that it drinks up all the snow and rainwater, there being no gullies on the side hills; while two or three feet below the surface, there is a very dense strata of a kind of hard pan, composed of lime that whitens the hands working in it, sand, gravel, clay and small stones. It is evident that dry weather can produce but little effect on such soil rightly tilled. Again, the surface soil is full of lime, and some of the limestones are in a state of disintegration; the growing season is longer here without frost than in the south; and the ground is not frozen in winter under the snow, and when the snow leaves the surface bare in spring, the leeks and other plants supply animals with food already grown. About grass I can say nothing positive; there being not sufficient experience. Wheat is apt to be smutty; but this is effectually prevented by soaking the seed in brine, and then liming it while wet.

8. The oldest white settler has been here 15 years; but farming has been commenced only four years since; and there are only three or four farmers that raise enough for themselves. I have been here only a year and a half; and only two commenced four years since, and raise more than they need. Next summer we shall have a grist mill.

9. Decidedly the best time to move hither is as early in spring as possible. Take any Upper Lake boat to Mackinac, and a small propeller will bring you from thence hither twice a week. Or write to Hannah, Lay, & Co., Chicago, who will inform you when their lumber vessels sail, in which you can come direct. Or Oliver Newberry, of Detroit, will inform you when the Michigan sails.

10. Finally no person ought to move hither unless he can go into the woods and chop out a home for himself; but while he is doing so his cordwood will purchase provisions. There is no other employment here, except at the saw-mills in winter, no person hires labor at any season. H. R. SCHETTERLY.

Grand Traverse, March 2, 1856.

Stable Floors.

EDITOR FARMER:—I observe a discussion in your paper, between Messrs. Cobb and Sweet, relative to the merits of floors for stables.

Horses standing continually on a plank floor, get tired, and frequently the *ring bone*, if young. If continually on earth floor, it becomes muddy, filthy, and produces *scratches*.

I find a floor consisting of both kinds, best. I have my stalls wide enough for two horses to stand by the side of each other, one half of each stall with plank floors, the other half earth floor.

At first a horse will usually choose the plank, but as he becomes tired of standing on a hard floor, he will change to the earth floor.

This floor combines all the benefits of both kinds in the same stable. L. V. BIERCE.

Akron, Ohio, March 12, 1856.

On Ascertaining the Age of Animals.

EDITOR MICHIGAN FARMER:—A correct method of ascertaining the age of animals is a matter of so much importance to the public, that a portion of time and space may be well occupied by this interesting subject.

In the following article, the opinions of the best authorities are combined and condensed, and presented in a manner that I hope will prove acceptable to your readers; in it I mention the most accurate methods of judging the age of the horse, the cow, the sheep, and the deer.

Animals are said to live about seven or eight times the length of the period which they take in arriving at maturity.

By observing the growth and decay of the teeth of some animals, and by certain marks on the horns of others, we are enabled to ascertain their ages, with a tolerable degree of certainty.

The age of the horse is best known by the appearance of the incisive teeth, or nippers, as they are called; there are six of these in each jaw.

In fifteen days after birth, the foal, or milk teeth appear; these are rounded in front, and present a surface with the outer edge rising in a slanting direction above the inner; this inequality soon begins to wear down, and the mark in the centre of the teeth which was at first long and narrow, becomes shorter and fainter. At six months old, the four nippers are worn nearly to a level.

At 1½ years old, the mark in the central nippers will be short and slight; in the others it will present a considerable change, and *all will be flat.*

At 2½ years the central pair of nippers or milk teeth fall out, and are replaced by two permanent teeth.

At 3½ years, one on each side of the permanent nippers falls out and is replaced by a permanent tooth.

At 4½ years, the two exterior teeth of the first set fall out and are permanently replaced.

All the permanent nippers are marked in their crowns with a circular pit or furrow, which is gradually effaced as the tooth wears down. The size and shape of the marks being a very correct means of ascertaining the age of the horse up to the eighth year, but at this time the marks are worn out of all the nippers, with the exception of the two exterior ones, these having appeared a year later than the others, *preserve these marks in proportion.*

Some of the best authorities state that *all the marks* are completely worn out, at eight years, but in this opinion I think they mistake, and an inspection of the mouth of an eight-year-old horse, will prove the correctness of the remarks I have made.

A horse of three years old will have the central permanent nippers *growing*, the other two pairs *declining*, six grinders in each jaw, the first and fifth grinders *level with each other*, and the sixth protruding; the sharp edges of the new nippers will be easily distinguished.

At 3½ to 4, the mouth cannot be mistaken; the central nippers will have nearly attained their full size. A space will be left where the *second pair stood*, or the new ones will have begun to appear above the gum. The corner nippers will be considerably diminished, and the mark within will have become small and faint. At this period the second pair of grinders will be shed.

At 4 years, the central nippers will have attained full size; the sharp edges will be a little worn, the marks will be *shorter, wider and more indistinct.* The next pair of nippers will be up, but they will *be small and deeply marked.* The corner nippers although reduced, are still larger than the inside ones; in them the mark is nearly effaced. The sixth grinder will have attained nearly full size, and the tushes will have begun to protrude.

At 5 years, the mouth of the horse is nearly perfect; the exterior nippers are quite up, and the mark in them is long and irregular. The other nippers are beginning to wear; the tushes are considerably grown, *the sixth grinder is up, and the third is wanting.*

At 6 years, the mark in the central nippers is nearly worn out, but there is a difference in color in the centre of the tooth, with a slight depression in the same place. In the next pair of nippers the mark is short, broad, and indistinct. In the corner teeth the edges are more even, and the surface somewhat worn. The tush has attained full size; the third grinder is up, and *the grinders are all level.*

At 7 years, the mark is worn out of the four central teeth, and is also beginning to wear away in the corner ones. The tushes are altered in appearance; they have become rounded.

At 8 years old, the mark is worn from all the nippers of the lower jaw, with the exception of the two exterior ones, as has been remarked before; in these teeth a *very faint mark* still remains.

The nippers of the upper jaw do not wear so soon as those in the lower, for they are not exposed to as much work, consequently the marks in them do not disappear so soon as in the lower teeth, and a good judge may form a correct opinion of a horse's age by observing the marks on the nippers of the upper jaw, when they have been obliterated in the lower teeth.

Some distinguished veterinarians state, that after eight years, a horse's age may be known by the *shape of the nippers*; they say that at eight, the nippers are *all oval*; the length of the oval running across from tooth to tooth; but as the horse increases in age, the teeth diminish in size; they become a little apart from each other, and their surface becomes a little rounded.

At nine, the central pair of nippers *are rounded.* At ten, the others begin to have the oval *shortened.*

At eleven, the second pair of nippers are *quite round.* At thirteen, the corner ones are rounded.

At fourteen, the faces of the central nippers become triangular.

At seventeen, *all the nippers are triangular.*

At nineteen the angles are worn off, and the central nippers are again oval, but in a reversed direction, or from outward to inward.

At twenty one, they are all oval, in the same direction first mentioned.

The age of the horse is always calculated from the first of May. Early foals acquire their teeth, and lose their marks, in proportion to their age.

After the eighth year, the age may still be ascertained by the state of the canine teeth or tushes. These are sometimes wanting, especially in the lower jaw, and are rarely to be found in mares. Between the tushes and the first grinders there is a large open space. The grinders are six on each side of both jaws. They have their crowns squared, and are crossed with laminæ of enamel. The freshness of this enamel shows the youth of the horse, and *vice versa.*

The canine teeth or tushes of the lower jaw, appear at three and a half years, those of the upper jaw at four years. Till six, they are sharp pointed, *and at ten quite blunt and long*; at that time the gums begin to recede from their roots.

After a horse is ten years old, the teeth cannot be *relied on*, as a correct method of ascertaining his age. Yet a good judge may form a tolerably accurate opinion by the size, bluntness and discoloration of the tushes.

The eye-pits of the horses of from ten to fourteen years of age, become gradually more hollow, and their eyebrows grayer, year by year. The bars or ridges of the palate are effaced in proportion as the horse advances in years.

In horned cattle the age is more visibly apparent, and more readily discovered by means of certain marks on the horns than by the appearance of the teeth. The horns of the cow appear to grow uniformly for the first three years, after this, each succeeding year adds a ring to the root of the horn; so the age of the bull, or cow can be easily ascertained by counting the *first ring four*, and adding the remaining ones.

The ages of cattle may also be known by the shedding of the teeth.

In sheep and goats the number of the knobs on the horns indicate the age of the animal.

The ages of sheep up to a certain period, may also be known by the teeth.

At one year old, sheep lose the two front teeth of the lower jaw; six months afterwards the two adjoining teeth also fall out, and are slowly replaced by others. Young sheep are easily known by the uneven appearance of the teeth, and the exact age is ascertained by the particular stage of growth in which the teeth appear, as they progress to maturity. At three years old, the teeth of the sheep have arrived at full size; *they are all even* and very white, and the animal is said to have a *full mouth.*

As the sheep advances in age, the teeth lose their enamel—become very much discolored—and afterwards blunt and uneven.

In some parts of Great Britain and Ireland, farmers resort to the cruel method of removing the teeth of old ewes, when they wish them to feed in turnip fields, without injuring the bulbs of the turnips.

In such cases the front teeth are punched or chiseled out, and the sheep pick off the turnip tops but cannot injure the bulbs.

Deer shed their horns annually, and in this class of animals, horns are, with a few exceptions, peculiar to the males. The female Reindeer has horns, and they are subject to annual shedding like those of the male. The horns of the deer are at first spear-shaped, without antlers or branches, but each succeeding year of their lives, adds one or more branches until a certain number are produced, afterwards the age can be ascertained by the thickness of the horns, and the size of the knobs which connect them with the skull.

In the stag, the young horns, or spears fall off in the second year of the animal's life, and are replaced by others having a single antler called a fork. This falls during the third, and is replaced by one bearing three antlers. On the succeeding year these too fall off, and are replaced by others which bear *four antlers*, and these on the fifth year, are replaced by other which bear five, and so on till the eighth year. Some assert that the number of branches continue to increase until the tenth or twelfth year.

In the song of Blanche, the "crazed and captive Lowland maid," Sir Walter Scott alludes to the horns of the stag in the following lines.

> "There was a stag—a stag of *ten*,
> Bearing his antlers sturdily,
> He came stately down the glen
> Ever stag hardily, hardily."

In a note on the "Lady of the Lake" the allusion is explained thus: "Having ten branches on his antlers."

Naturalists assert that after the age of eight years, the number of branches on the antlers do not increase regularly.

EDWARD MASON.

A REASONABLE INQUIRY.—S. A. Scott, of Lima, writes. "I have seen a good deal said, about the benefit of deep plowing; some speaking of plowing ten inches, others of twelve inches, and some even run the thing into the ground to the depth of eighteen inches. Now if any of these deep plowers, will inform me where I can get a plow that will turn up a furrow, in a good workman-like style, *twelve* inches deep, with less than three or four yoke of heavy oxen, I will be obliged to them. I have been trying to get such a plow, for these last six years, but as yet, I have not come across one."

The Apiary—No. 2.

The formation of wax is a singular and complex operation, and to many will no doubt be interesting. Huber says: "The wax-makers having taken a due portion of honey or sugar, from either of which wax can be made, suspend themselves to each other, the claws of the fore-legs of the lowermost, are attached to the hind pair of the uppermost, and form themselves into a cluster, the exterior layer of which looks like a curtain. This cluster consists of a series of festoons or garlands, which cross each other in all directions, and in which most of the bees turn their backs to the observer; the curtain has no other motion than what it receives from the interior layers. All this time the nurse bees preserve their wonted activity. The wax-makers remain immoveable for about twenty-four hours during which time the formation of wax takes place, and thin layers of this material may be perceived under the abdomen. One of these bees is now seen to detach itself from one of the central garlands of the cluster, to make a way among its companions to the middle of the vault or top of the hive, and turning itself round to form a kind of void, in which it can move itself freely. It then suspends itself from the center of the space which it has cleared, the diameter of which is about an inch, it next seizes one of the lamina of wax with a pincer formed by the posterior metatarsus and tibia, and drawing it from beneath the abdominal segment, one of the anterior legs takes it with its claws and carries it to the mouth. The wax is formed beneath the scales on the underside of the abdomen. The bee may be seen running round to and fro, as if endeavoring to shake off the scale; this attracts other bees which are ready to seize upon the plates of wax as they fall. To mould the wax scales into the walls of the cells, it is supposed that the bees have the power of applying some softening substance to the wax scales, by which they are enabled to blend them into a ductile paste. During this operation the tongue assumes different forms; sometimes flattens like a spatula, then like a trowel, at other times like a pencil. The tongue then pushes it to the mandibles where it is worked up; the softening article mixed with the wax, gives it a degree of whiteness, which it had not before.

Bees generally begin at the top of the hive and work downwards in the form of a vertical wall, forming cells in succession. Each comb has usually a double set of cells. The combs are not always regular, neither are the cells all of equal size, but a sufficient quantity are adapted to receive the eggs The spaces between the combs are about half an inch, the combs have holes in them to permit the bees to pass from one comb to another; the cells are hexagonal, the only form which can occupy all the space in the comb. The royal cells, those in which queens are raised, are wider than the rest and project out of the comb. As soon as a few combs are formed, the queen begins to deposit her eggs, the first are thought to be the workers, then the drones and fertile queens. The eggs are deposited at the bottom of the cells, and often before the combs are half completed. We have known combs partially made and eggs deposited in them in thirty-six hours after being hived. The eggs adhere to the bottom of the cells, and in about five days are hatched, and the larva may be seen coiled up in the cell.

Additional employment for the bees now begins. That of feeding the larva. For this object new materials are to be collected as food for the young bees. This is the pollen collected from flowers, which is moistened and packed away in the cells · The bees may readily be detected in feeding the larva, which open their latteral jaws, receive the bee-bread and swallow it. The larva soon grows too large for its skin, and casts it. After growing so large as to fill its cell, it receives no more food, and is ready for the chrysalis state. The last care of the nurse bee is to cover over the cell to enclose the larva. This is generally four days from the time it is hatched. The enclosed larva now begins to line the cell with a fine silken fiber; the larva soon casts its skin and becomes a chrysalis.

All the metamorphoses take place, and in from fifteen to twenty-two days from the time the eggs are deposited the perfect bee comes forth, of a grayish color and soon assumes the brown tints. The difference in time is in the production of workers, drones and queens. N.

Grub in Sheep.

Mr. Editor: I see in the March number of the *Farmer*, an enquiry concerning a disease in sheep, over the signature S. Witter.

The disease he refers to, is undoubtedly the grub in the head, a fact which he or any other individual having sheep die with such symptoms as he mentions, can ascertain by opening the head.

The remedies are the following:—First to keep the sheep well supplied with tar in that part of summer when they are troubled with flies; the flies depost in the nostril the egg from which the grub is hatched. In the second place, give your sheep a good chance, as sheep that are in good condition are generally able to resist the operations of the grub, without much injury. And in the third and last place, if the sheep get very bad, so that there is danger of losing them, blow tobacco smoke in the nostrils of the sheep for the purpose of destroying the grub. For more particular directions on the subject, see Morrel's American Shepherd; or almost any other writer on sheep.

Cosmopolite.

Ypsilanti, March 1856.

Income of a Farm.

Mr. EDITOR:—I have neglected sending you the returns of my small farm as soon as I intended to have done. I have 123 acres, 90 of which are tolerably well improved. In 1854 my wheat crop was deficient; in 1855 I sowed no more than my corn-field, about nine acres. I estimated the crop at 16 bushels per acre, one-fourth lost in harvesting. For two years past the raising of stock, and cows for the dairy, has been my chief support. The last year I sold from seven dairy cows, butter to the amount of $217.05, besides raising seven calves, which I value at $63, to keep on my farm. They are sired by full bred Durhams, their dams, a cross of the same blood on the choicest selections for the dairy of what is called native stock. The past year I kept thirty sheep, Leicester with a cross of Southdowns. Their net returns for one year was $94.00, and I have the same number on hand.

The following is the amount of produce sold from my farm during the last ten years, commencing with 1846. The average of the first five years was $560. 62; of the last five, $850.62. My least sale was in 1849, the amount $407.92; my largest sale was in 1853, $1,052 40; that year I sold 465 bushels of wheat on the 16th of August at $1 per bushel. My least expense per year for farm labor the last ten years was $150, for hired men; the most, $300, in one year for farm labor and farm improvements.

If days permit, I wish to make my farm more productive by draining, manuring and seeding to clover and grasses. I have been here an actual settler 28 years, and have not followed up the plow and sow system more than I thought was for the improvement of my farm.

A friend to agricultural improvement,

JOHN PHILLIPS.

Ypsilanti, Mich., 1855.

Farm Book-Keeping.

I am a subscriber to the Michigan *Farmer*, and have been for six years. I happen to have the first claim to the Premium Farm in the Banner County of this State. I wish through the medium of your valuable paper to recommend to my brother farmers the propriety of keeping a farm book. What I propose is, in the first place to get a blank book for the purpose, and at the first of January of each year, to take an inventory of all property, which should be entered in it, both personal and real estate. Next, open debt and credit with the farm in it; credit the farm with every thing sold off from it, charge the farm with every thing brought on to it; the inventory will show the growth of stock and rise of real estate, if any there be.

In this way we may determine our whereabouts. This is highly necessary for every practical farmer, and very gratifying. In this way we are able to determine to a demonstration whether farming is profitable or not. I would further recommend keeping debt and credit with each field, this will show us what branch of farming is the most profitable.

This I consider of the utmost importance to us farmers. But in order to do this systematically we must have a plan of our farms drawn off. I have a plan drawn on a sheet of drawing paper, 22 by 28 inches; each field is numbered with the amount of land in each field. In order to be more fully understood, and to show what I have done, I will give below the notes of field No. 1, of 10 acres which was planted to corn in 1853; this field had laid to clover three years; the account stands thus:

Oct. 15.	*Dr.* to 8 days with double team plowing, $3			$24 00
" "	" use of plow 8 days		25c	2 00
April 6,	to 3 days with team and cultivator		2	6 00
May 10,	to 1¼ day marking corn		1,50	2 25
" 12,	" 4 days planting		1	4 00
" "	" 1½ bushels seed corn		1	1 50
June 10	" cultivating corn first time, 3 days		1,50	4 50
" "	" six days hoeing first time		1	6 00
" 18	" 2 days cultivating second time		1,50	3 00
July 1	" cultivating third time 2 days		1,50	3 00
"	" use of soil for 1 year			30 00
Sum total of expense of crop				$86 25
Cr. to 900 bushels ears corn, worth				225 00
Expense on 10 acres corn				86 25
Sum total on net profits				139 25

In this manner go through with each field that is tilled or mown; the inventory will show the proceeds of the pasture in the increase of stock, or the amount sold. I would further recommend to every farmer to carry a passbook in his pocket, and have every article inserted there that you buy of your merchants. This will show what and how much we have traded at the stores. I am aware that many farmers will say this is too much trouble; but every farmer has sufficient time to attend to this matter, besides this, it is a satisfaction to every one to know how we are getting along from year to year.

On looking over my notes of last year, I find a balance in my favor of $1432,40, this includes the advance of real estate and products of the farm; you may conclude by this time, that I am not very sick of farming.

I am glad to see a premium offered for the best specimen of farm book-keeping. I would be glad to see all our county societies offer a premium for the same. How can a farmer report to a committee on farms without keeping a farm book? I would like to say something about farming, rotation of crops, the effect of deep plowing, and how to kill sorrel but I must close.

Yours truly,

JAS. CLIZBE.

Quincy, Feb. 5, 1856.

A QUERY.—A subscriber wishes to know if any of our readers have observed that chip manure, when put around apple trees, has the effect of breeding the worms that infest the bark, and frequently cause the destruction of the tree.

Horse Controversy, A Challenge, Vermont Hero, The Morgan Blood.

BY A. C. FISK, COLDWATER.

Mr. Editor:—My attention has been called to several communications published in the *Farmer*, over the signature of "Abdallah Chief," laudatory of a stallion of that name, which would have been passed over in silence, had there not been in them an attempt to decry the merits of the Morgan stock of horses. The controversy that has been carried on so long in the *Farmer* between "Abdallah Chief," "Fair Play" and "One of the Committee," was not such as necessarily to bring into the discussion any particular breed of horses. It was originally confined to particular horses, and the treatment a particular horse received at the late State Fair. With such a controversy the writer of this had no desire to interfere. But your correspondent, "Abdallah Chief," has stepped out of his way to assail the Morgan breed, and in his strictures, includes the whole race. Being somewhat interested in Morgan stock, and believing that it cannot be sneered down, the writer asks a space in your valuable paper, to make a few remarks in reply. No objection is made to an effort to *write* up a horse, or give him a newspaper notoriety, if not made at the expense of others equally deserving. The writer has not a word to say against Messenger horses. They are a noble breed, and worthy of commendation. Some of the best stock of the country are descendants of the Messengers. That "Abdallah Chief" is all his "proprietors" claim for him is not denied. While admitting this, the writer desires to call the attention of "Abdallah Chief" (your correspondent, not the horse,) and all others interested in improving their stock, to a few things not to be found in any of the communications alluded to.

The owner of a Morgan horse at Coldwater, known as Vermont Hero, took him to the last State Fair for the purpose of competing for the premium, and with the expectation of testing his "bone and muscle," and also his "wind and bottom" upon the Hamtramck course, in competition with all others of the same class. The writer supposed that no stallions in that class would get a premium without this test. In this he was disappointed. Hero had been regularly entered, was on the track every day during the Fair, and on the day appointed for the trial, was stripped and declared ready to go. This readiness was proclaimed publicly and repeatedly. The friends of this Morgan even offered as an additional inducement, to back Hero with any desired amount of money.

The writer had been at a great expense in transporting his horse to Detroit, and keeping him during the Fair, and was unwilling to return until his "wind and bottom" had been tried. He felt confident that his horse would show to advantage in this manner. He therefore urged the propriety of this test upon the managing "proprietor" of "Abdallah Chief," and who was the proprietor of the track, by every inducement in his power. My readiness to enter the list in this friendly strife, was made known in a manner that might be deemed boisterous. And who prevented this test? Not the owner of Hero. The truth is, the "proprietors" of Abdallah Chief were not ready for such a contest, and hence prevented it.

The writer, knowing these things, cannot clearly comprehend what is meant by the following extract taken from a communication in the February number.

"This is precisely what the 'proprietors' sought all the time, as is proved by their efforts to have a fair trial of speed on a proper track, made a test at the Fair."

And again, "Such a trial is just what we want, either with 'that perfectly formed, promptly stepping, stylish Morgan from Coldwater' so justly praised by 'Fair Play,' or *with any other*."

If the "proprietors" of Abdallah were so anxious to try the speed of their horse, why did they refuse to trot with my horse? Why postpone the trial from day to day and finally refuse to bring Abdallah into the field? Your correspondent dare not say that my horse was not ready for such a trial. Who got up the advertisements, and scattered them broadcast over the country, offering a purse of fifty dollars for stock horses to compete for, and naming the day when the trial was to come off? Was it not some of the proprietors of Abdallah Chief?

Again says your correspondent, "and what Morgan, we would ask, has he ever heard of, that could make a three mile, or a two mile trot with a Messenger? What Morgan ever made a respectable show of time inside of two forty?"

Perhaps not a large number of Morgans can make a "respectable show of time inside of two forty," neither can every Messenger. There are some, however, that are said to be fast trotters. Did "Abdallah Chief" ever hear of Sherman Black Hawk, Ethan Allen, Black Ralph, Belle of Saratoga, Black Hawk Maid, Know Nothing, Red Leg, Lady Litchfield, and many others of the Morgan stock, that never refused to try their "wind and bottom," with any Messenger that made pretentions to trotting? To come to the point, the undersigned knows more than one Morgan whose owners are ready and willing to back them for a "three mile, or two mile trot," or any other distance, and repeat, with any Messenger to be found in the State, and not excepting "Abdallah Chief." Names can be given if desired, and will be.

Your correspondent, "Abdallah Chief," quotes approvingly, and thus makes it his own, a letter from the Spirit of the Times, in which the Messenger breed of horses are represented as the best and purest stock in the country, and the Morgans as a "pony race of horses, bred originally from a pony race,

without a four-miler or a first rate trotter among the whole race—many, if not all, of the finest specimens of the race are more than half blooded with other stock," &c.

Allow me to inquire, in reply to this tirade, how much pure Messenger blood can "Abdallah Chief" boast of? How many pure blood Messenger stallions are there in the country at this time? How much larger and heavier is "Abdallah Chief" than the "pony" called "Vermont Hero?" The undersigned asks these questions for the sole purpose of suggesting the idea that "those who live in glass houses should not throw stones."

Let me repeat, I have nothing to say against Abdallah Chief, or the Messenger breed of horses—all that is asked is fair play. The owners of Messenger horses should not misrepresent the Morgan stock, for the purpose of manufacturing public opinion in their own favor.

For the benefit of those interested in raising fine horses, allow me to give the following account of the origin of the Morgan breed of horses:

The original Morgan—known as the "Justin Morgan," was sired by True Briton, formerly owned by General De Lancey, commander of the refugee troops, and rode by him in the war of the revolution. True Briton, it is said on good authority, was sired by the celebrated imported horse Traveler. The dam of "Justin Morgan," was sired by Diamond—he by the Church horse—and he by the imported horse Wild Air. The last named was the sire of much valuable stock. He was imported by General De Lancey, in 1761, and after having been used as a stallion in this country, was re-shipped to England in 1773. Wild Air was the property, previous to coming to this country, of William Swinborn; and was sired in 1753 by Old Cade, son of Godolphin Arabian; his dam by Steady, a son of Flying Childers.

Of the progeny of "Justin Morgan," three became famous as stallions, viz: the Sherman Morgan, the Burbank horse, or Woodbury Morgan, and the Chelsea horse, sometimes known as Delino, or Bulrush Morgan.

The Sherman Morgan was out of an English blood mare. "Vermont Hero" is a descendant of the Sherman Morgan branch of the Morgan stock.

Several of the Morgans have become famous on the turf, having made their mile in 2:26, 2:28, 2:32 and 2:35, notwithstanding the assertion of your correspondent "Abdallah Chief," to the contrary. The undersigned has never boasted of the "wind or bottom" of his horses, but has ever been ready and willing, at all reasonable times and places, to test the speed of Hero, with any stallion kept for stock, in the State. His horses are now running out, and will require a few weeks to put them in condition for such a test. As soon as this can be accomplished, my horses shall be ready for the trial.

The undersigned proposes to accept the challenge of your correspondent, "Abdallah Chief," with these conditions annexed, to wit: that the trial shall be on the Coldwater course, best 2 in 3, or 3 in 5, mile heats, in harness, or as Abdallah pleases, at any time after two months, by having six weeks' notice. With these conditions, the undersigned engages that a Morgan horse shall match "Abdallah Chief," and that extraordinary circumstances only shall prevent the trial, on the day fixed.

Hoping for an early and favorable answer, I remain,

Respectfully yours,

A. C. Fisk.

The Cause of the Motion of Sap in Growing Vegetables.—No. 4.

BY H. R. SCHETTERLY, OF GRAND TRAVERSE.

There are a number of phenomena attending vegetation, which can be explained only on the principle of electrical action. Some of these are irreconcilable with the popular theories of circulation, a few of which are subjoined in proof of the Electric theory.

1. It is now generally conceded by Physiologists that the compounds formed by vegetables, such as gum, resin, poisons, oils, aromatics, coloring matter &c., are effects of chemical action. And it is observed that they are principally produced in the intertropical regions of the earth where the sun shines almost every day with uninterrupted and intense splendor, and its influence is not interrupted by cold as it is in the temperate and frigid zones; few, and these of a very inferior quality, being found in climates subject to any material changes of temperature. Now, if these compounds be produced by chemical action, as most writers contend, they must be produced by electrical action, for Faraday has proved these two forces to be identical; and since the compounds named are principally carbon, oxygen and hydrogen, and these elements do not act chemically upon each other without a combining agent, it is obvious that they must derive this agent from an extrinsic source: and the fact that they can be formed only under the influence of solar, in contradistinction from common light, proves that the chemical agent by which they are formed, is electricity coming from the sun. Hence it appears that the same agent whose action propels the sap, and enables vegetables to digest their food, also enables them to form products more numerous and various than the vegetables are themselves.

2. There is not only a general circulation of sap, but the constituents of every distinct product are attracted by, and conveyed to particular organs destined for its peculiar elaboration; and those organs are always directly connected with the medullary

rays, which, being non-conductors, are capable of receiving and temporarily maintaining a high degree of electrical excitement.

3. On each of three branches of a vine trained horizontally, Dr. Hales fixed a glass tube, bent into th form of a syphon, with the bend downwards, March 30th, and filled the curved parts with mercury to a certain height. The first and third branches were two, and the second three years old. By the sap conveyed from the earth to the cut ends of the branches and into the tubes, the quicksilver was forced up in the open limbs of these tubes to the height of 14½, 12½, and 13 inches, respectively. In consequence of the pressure of the sap, the mercury stood higher in the open limbs of all the tubes, than in those attached to the branches, from the 4th to the 20th of April. On the 21st of April, when the flowering was nearly over, the sap went back in the middle branch; in the lowest it did so seven days after the middle one; and in the third or highest limb, it went back thirteen days after the middle one. "Hence," says Hales, "the cause which produces the flow of sap, does not proceed from the roots alone; but belongs to a force inherent in the stem and branches; for the middle branch absorbed seven days before the one, and thirteen days before the other. The cause of the flux had, in the oldest branch disappeared, while it still continued active in the two younger branches; but was scarcely perceptible during rainy (cloudy) days and nights." This experiment (and others might be adduced to substantiate it,) is so obviously irreconcilable with all the popular theories, and so convincingly confirms the electrical one, that it is entirely unnecessary to offer a single observation on it.

4. "You are acquainted with the fact that various classes of plants select different inorganic materials, and in different proportions; each plant having its fixed law, though the soil be full of all that is both rejected and received. Can you give any explanation of this? That it is owing to some form of electricity is probable. If not, as we cannot attribute to plants instinct and sense, is it the result of some agency yet unknown to man." Asked by Rev. Charles Fox, lecturer on Agriculture in the University of Michigan.

Answer.—Nature's works are full of analogous examples, both in her inorganic and organic kingdoms: and the explanation of all such phenomena is found in the various electrical endowments of different substances, and in their susceptibility of receiving different quantities of this agent, in addition to what they naturally possess. These conditions cause vegetables to reject substances endowed equally; and to attach others unequally endowed with electricity, with a force proportional to the difference between their respective endowments, and limits the combining quantities of substances by their susceptibility of receiving different and varying proportions of electricity. It is certain that all substances are endowed with electricity, in different proportional quantities; for this may be seen in any table of electro-chemical equivalents; and Prof. Faraday hints, accordingly, that electricity gives bodies their properties.

Water and alcohol mix without any sensible chemical (electrical) action; alcohol and sulphuric acid combine with a considerable evolution of heat. One pound of hydrogen contains as much electricity as eight pounds of oxygen; and when a mixture of these two gasses is condensed by passing an electric spark through it, they combine with an evolution of intense heat, and when a piece of lime is approximated, with the most brilliant artificial light that art can produce, forming nine pounds of water, without setting free any electricity. Nine pounds of water, therefore, contain as much electricity as one pound of hydrogen, and eight pounds of oxygen. Moreover the analysis of Isomeric and Polymeric compounds, proves that elements may be combined in the same relative proportions, but with different proportional quantities of electricity, so as to form compounds totally different in all their properties and sensible qualities; and the different functions which different parts of the same vegetable perform, simultaneously, are, no doubt, owing to their various electrical endowments. But, to come more directly to the point:—

A lump of chalk immersed in colored water, absorbs the water and leaves the coloring matter on its surface, but will not absorb mercury. Gold, on the contrary, imbibes mercury with such facility that the gold trinkets of those who work in mercury, become permanently tarnished in a few days; but it absorbs neither water nor coloring matter, which mingle readily with each other, though it is not impervious to water, as proved by the Florentine Academicians. This difference can not be imputed to a difference of size in the pores of gold and chalk, or to the difference between the atoms of water and mercury; for gold is one of the densest of metals, and chalk one of the least dense of solids, while the atoms of mercury are certainly not less in size than those of water.—Again, Liebig states that, after using an animal membrane as a barrier to an endosmometer for a time, it loses its absorbent property, but will absorb again after it has for a while been in contact with other substances; which can be owing only to two successive electrical changes. Two quantities of water, separated by an animal membrane, will not mix through it; but Dutrochet has shown that if the water on one side be electrified, it will all exosmose through the membrane into the negative water on the opposite side. If a mixture of water and alcohol contained in a bladder, be subject to a current of air, the water exosmoses into the atmosphere and leaves the alcohol pure in the bladder, because the affinity, both of the bladder and air, is stronger for water than for alcohol.

Prof. Draper, of New York, has experimentally proved that capillary attraction, and endosmose and exomose, are exclusively caused by the relative electrical condition of the liquids and solids brought into relation with each other; and, from the proportions already established, it is perfectly philosophical to assume that the intensified electrical condition of the sap-vessels, produced by the action of solar light upon the leaves of vegetables, should produce the increased effect witnessed in the circulation of the sap. In fact, it may be confidently asserted that there are scarcely two different substances in existence, that do manifest an attractive or repulsive affinity for each other, when brought into relation, and the surrounding circumstances are such that they can manifest it. And the reason this is not more frequently noticed, is because it has become too familiar to be noticed.—Linen is more easily wetted than cotton, and cotton more easily than woolen cloth. A cotton wick, acting as a syphon, will conduct water out of a lamp from under oil; but, if the wick be lighted, it will raise the oil to the point of ignition and leave the water under it. In the first case the wick attracts the water with more force than it does the oil; in the second, the wick being lighted causes electric currents to flow towards the point of ignition, as shown by Seebeck, and the ambient air to give up a part of its charge also; and the electrical condition of all, or at least of some of the substances brought into relation, is changed, and the effect is varied, accordingly.

The reason, then, why particular vegetables absorb particular substances and reject others, is to be found in the varying electrical endowments of those vegetables and substances. They can not absorb what they do not attract, nor attract an equally electrified substance; and that which is at one time unequally electrified may become equally so, and then be repelled.

Inquiry about Marshes.—Diseased Sheep.

Mr. Editor:—I wish to make some enquiry about the cultivation of those large marshes, which this State abounds in, such as have no timber or bushes on them, and contain from twenty to two hundred acres each, with muck from two to ten feet thick, resting on a bed of marl. I have two hundred acres of such land, with plenty of fall, a part of which I have made as dry as any land can be; have sowed timothy and red top, and dragged it in thoroughly. It would come up but would not stick. The marsh that is drained, used to bear from one to one and a half tons of good marsh hay per acre, and now nothing but weeds. Where is the difficulty? There is something lacking, or too much of something that does not agree with the cultivated grasses. Any one who has successfully reclaimed such a marsh, please instruct us.

There is a great mortality here among sheep; fully one third have died among the second rate farmers. This is all wrong, and is the result of pure shiftlessness. Proof: I yesterday saw a flock of between four and five hundred, (in Napoleon,) of which the owner told me he had lost but one, and that one was killed because it was a "little sick." His rules for keeping sheep, though old, will bear repeating: Have them in *good order in the fall*, never keep one that looks doubtful, cull close before winter, give your grain before your sheep get poor, and with good feed, water and shelter, he loses less in winter than summer: says disease in sheep here is, as a general thing, a humbug, which the looks of his flock fully prove.

A Farmer.

Manchester, Feb., 1856,

[Neither the timothy, nor red-top grasses will grow to any advantage on marsh land that is but partially subdued. Before a piece of marsh land is fit to grow the cultivated grasses, it should be thoroughly broken up, if possible. The draining of it puts it in a condition to cultivate, but until the strong vegetable soil of which the surface is composed, has been worked, and thus exposed to the action of the air, no beneficial results can be expected for a long time to come. The surface of most marshes consists of a soil almost entirely composed of the decayed wild grasses and other plants which have been growing on it ever since it has sustained any vegetation. All this vegetation has been such as is natural to moist or wet places, and the presence of standing water has prevented the vegetable matter from becoming a complete mould. The soil of the marsh, therefore, when drained, is still unfit to grow grain or grass crops. Exposure to the air, by plowing, however, soon mellows it, or in other words, has the effect of decomposing many of the half decayed substances which are for the first time turned up to the atmosphere, and which, while they afford nutrition to plants that flourish on them in a state of nature, are totally unfit to promote the growth of other more valuable plants. When a marsh is drained, and is in a fit state to plow, it should be broken up in the fall, and the soil allowed to have the benefit of the exposure to the frosts of winter, and then planted to corn or potatoes, the cultivation of which, through the summer, will still further tend to mellow the soil. After this it may be seeded to timothy or red-top, and if there should be 25 or 30 bushels of lime given to each acre previously, it will be found there will be little complaint of the failure of the hay crop from being overrun by the wild vegetation of the marsh.

According to the above writer, the sustaining element of the grasses from which he made his marsh hay, was taken away, namely: the water. Of course those grasses died out, and in their place sprung up a crop of plants which the soil was in the most fit state to sustain. If we understand his letter correctly, he did not break up the marsh after it was drained; but

he passed over the surface of it with a heavy drag, and then sowed his grass seed. Of course the weeds had the start, and all that class of vegetation which is natural to dried marshes, would flourish and overrun the other grasses which found the peaty soil totally uncongenial to their growth. It takes a little time to subdue a marsh thoroughly, but it will pay, if well and thoroughly done.—Ed.]

Stump Machines.

Our inquiry in relation to stump machines, has elicited several replies, and also several plans, which we take pleasure in laying before our readers this month. First, came a letter from Messrs. A. Smith & Son, of Birmingham, in this State, in which they say:

"We can get up for the inquirer, or for those who choose to send us orders, with cash, a cheap stump machine, the cost of which will not be over $40. The machine will be easily handled, though not quite as "easy as a plow." This machine draws the stump by means of a screw and lever, worked by one horse or a yoke of oxen, and with proper management, it can extract any stump. One horse can easily drag it from one stump to another, and two men can handle it with ease, place it astride of the stump, attach the hook and chain to a good stiff root, and then having attached the horse to the lever, the stump must come."

In this machine, the whole point would be to have the frame work, which supported the nut and screw, of sufficient strength to sustain the tremendous pressure to which the whole would be subjected when the power was applied. In the following letter the same difficulty would have to be met:

"Your correspondent, in the March number of the Farmer, inquires for a *cheap stump machine.* Allow me, in answer to the inquiry, to describe the machine constructed by Mr. Rankin, of Rochester, Mass., which he, a "cannie Scotsman," uses to raise heavy rocks, and remove to the line of stone fence, where, instead of being a nuisance, they perform good service.

While visiting in the place last season, he explained to me its construction, for which he claimed no patent, and yet at a cost, if I mistake not, of *fifteen dollars only,* (wagon of course excepted.) It is a machine that is capable of removing such rocks and stumps as a common wagon can be driven over and astride.

Take well seasoned oak timber, say six by eight inches, long enough for a wagon bed, and connect the two side pieces, by mortice and tenon. This is the platform, that rests on the axletrees of the wagon. At the centre of the platform set a post on each side, some seven feet high, with a cap to connect them at the top, and run braces from near the top of the upright posts, both before and behind, nearly to the end of the platform.

Next, a wooden cylinder, say 10 or 12 inches in diameter, fastened by strong iron gudgeons, into the upright posts, just below the cap. *Outside each post,* on the end of the gudgeon, is a stout cog-wheel, from twenty inches to two feet in diameter, and below, a small wheel, with a stout crank, matches into the large one. A slight platform above the wagon wheels, for those who turn the crank to stand on, completes it.

Nothing more is now needed, than two or three stout chains and hooks, to pass from the cylinder to the roots of the stump. The wagon is driven astride the stump, the hooks placed under the roots, and one man at each crank, will soon raise the stump above the surface, when it is ready to be deposited wherever you please.

In a word, it is simply the *pulley,* with which every sailor and miller are familiar, adapted to the farmer's use. It is the same, however, by which two sailors are able to raise the heaviest freight from the hold to the deck, and by which this farmer was able to raise rocks of more than a ton weight. My only fear is, it will prove so *cheap* and *simple* that those who love to be humbugged with high prices and patent rights, will demand something dear-bought and far-fetched in its stead. Yours truly, S. Y. E.

In the next letter, the plan is simple, and with small stumps it will work, we do not doubt. With old settlers, we doubt if anything short of a heavy beam, with a good long sweep, would answer. The risk of the spring of the lever, to the team and driver, is also to be guarded against. Another plan:

Mr. Editor—I see in the March number of the Farmer, an inquiry about stump machines. I saw a plan for pulling stumps at the East, which I have tried for two years, since I have been here, with entire satisfaction. In fact, I consider it preferable to any stump machine I have ever seen work. I will not call it a machine, but a plan; and the cost of it is so trifling, that it is within the reach of every farmer. I take a large chain, 7 or 8 feet in length—it ought to be as heavy as is generally used on a stump machine, to make a sure thing of it. Then cut a hickory pole, 30 or 35 feet in length; hitch your team to the top end, with a good length of chain. Go to your stump and dig under one of the big roots, close to the stump, and put your chain under it; then draw the pole as close by the stump as you can—if not close enough, take a crow-bar and throw it where you want it. Then put the chain round within four or five feet of the butt; start your team the way that the butt of the pole will come against the stump—then something must come. If one team wont draw it, hitch on two, and mind and keep from behind the pole, and not too close before it. It wants two men to work it to advantage. The best time is just after the frost is out of the ground, or when the ground is very wet. I have pulled fifty in a day.

Yours, Charles Treadwell.

Ann Arbor, March, 1856.

Willis' Orange Stump Machine.

We have received a circular, containing a representation of a stump machine, patented about a year ago by W. W. Willis, of Orange, Mass. We have not yet had an opportunity of seeing it working, but in the eastern agricultural papers we have noticed several very commendatory notices of its mode of operation, and the ease with which it is worked. The following we quote as coming from a very reliable source:

"Since reading the statement of Lieut. Gov. Brown, we have visited Orange, examined the machine and seen its powers fully tested. It is all that Mr. Brown has represented; and in two or three particulars, we think, it is somewhat more: 1st, it is equally as well adaptded to drawing out stones, removing buildings, or almost any other business requiring a high power, as to the pulling of stumps; 2nd, it will operate with great rapidity without unreasonably severe effort on the part of the men or team; 3rd, it has come to its present improved state, slowly and by successive trial; did not come from the brain of a theorist, as Venus is said to have leaped from the brain of Jupiter, all beautiful and mature, armed cap-a-pie ready to love or to fight, but resulted from the experience of a practical man, one thoroughly schooled in the rough and tumble business of drawiug rocks and stumps.

But in commending it, while we are pledged to commend nothing which we do not believe to be worth buying, we are guided principally by what we have seen of its working. Mr. Willis took us into a field, which must have yielded a very large crop of pine boards. His force consisted of two men, neither of whom had eve worked at that business before, and a small pair of oxen. He said, "which stump will you see taken out." We selected the largest, the *ugliest*, and the worst situated stump in the field. He hitched to it as described by Gov. Brown, and lifted the great circle of roots and adhering earth, raising the side fartherest from the machine in advance of the other side, till it stood at an angle of 45 degrees. At this point the men knocked off the earth, letting it fall back into the hole. the yellow subsoil at the bottom and the darker top soil above it, He then worked the machine again, and drew the stump along till the last root was detached. The time of the operation did not seem to be more than eight or ten minutes, but it was not measured.—*Prof. J. A. Nash, in Connecticut Valley Farmer.*

Chinese Potato vs. American Potato.

Very much is being said and written of late, about the "newly discovered" but well known plant, the "Dioscorea Batatas," or Chinese Potato. I say well known, because it has been raised and used by the Chinese nation from time immemorial, the same as our common species of potato are here. Its habits and outward appearance are similar to the white variety of the sweet potato, and it may be propagated in the same way.

The advantages claimed for the Chinese Potato, are its productive and nutritious qualities, and being entirely free from disease; some say, "it is destined to supersede the ordinary potato." But here I beg leave to differ from the "opinions of the *press*," from the fact that this Chinese Potato, so well known in its own country, if it were really worthy to occupy so important a place, would long ere this have found its way to this continent; and as to its superseding our American Potato, either the common or sweet varieties, it will be, I think, when "free soil," and sound potatoes are numbered among the things that were.

No sir, I cannot *swallow* this "Chinese *Rohan*," so long as I am in possession of the Native American varieties, i. e. the "Mexican Wild," "Carolina," "Nova Scotia," &c.—nor would I forego the so called foreign varieties, as the "English White," "Scotch Muscovan," and "Irish Dandy."

It may be thoug t by some, that I, being something of an amateur seedsman, would not hesitate to recommend Dioscorea for general cultivation. To this I answer, although a lover of new varieties, and a friend to progress and improvement, I never have, nor never will, be guilty of knowingly humbugging the public. Therefore, farmers, be careful how you pay big prices for the Chinese Potato, except as an experiment.

By the way, I have been experimenting with the common potato, for more than five years, for the express purpose of ascertaining what varieties were the best for general cultivation. In the time I have grown some *forty* different varieties, out of which I have selected the following, which, according to my experience, are the most prolific and hardy, the least subject to the rot, and the best for table use, of any I have yet tried. I will name them according to their season, commencing with the earliest: "Early June," "Mexican Wild," (tame now,) "Long Island Mercer, or Meshanock," "St. Helena," "Purple Chili," "Scotch Grey," "Scotch Muscovan," and "Nova Scotia."

I have raised potatoes from the seed, or ball, with good success, but am not satisfied that these, or any other kind, will withstand the rot entirely, under certain circumstances. I think newish land, without manure, brings the soundest tubers; or old land, a sandy soil with swamp muck, wood ashes and plaster. I generally use full grown potatoes, cut into small pieces and rolled in plaster, for seed. By taking these precautions, I believe I have not lost one half bushel of potatoes by disease, in five years.

As to the sweet potato, my experience is limited, not being able to keep them perfectly through the winter. These, like the Dioscorea, I think are better adapted to a more southern latitude, but will grow and do well in Michigan. Will some one give us the *modus operandi*, and thereby confer a favor on such of the readers of the *Farmer* as are interested in the cultivation of the Carolina, or Sweet Potato.

D. D. TOOKER.

Napoleon, Mich., March 7, 1853.

Potatoes–Effect of planting seed with but one eye in each cutting.

EDITOR MICHIGAN FARMER, SIR:—Last spring I planted potatoes on ground well prepared, in shallow furrows, or drills, three feet apart, dropping single eyes from eight to ten inches apart, and covered about an inch.

The first I planted the 16th of April; on the 12th of June I dug and cooked a meal, and after the 20th of June we used them freely. My product was unusually abundant and good—about 400 bushels to the acre. The advantage is two-fold,—a great saving of seed and an increased production. No barren stalks or vines, but each gave from three to five good-sized potatoes, with less small ones than are sure to be produced by using whole potatoes for seed. I think six bushels will seed an acre. I cut the pieces as large as possible, having but one eye on each. My soil is yellow oak plains, dry and naturally sterile. It had been well manured two years ago, for a first crop. I planted the 10th of May.

Yours truly, C. CLARK.

Ann Arbor, Dec. 10, 1856.

Stowell's Evergreen Sweet Corn.

MR. EDITOR:—Having found by experience that the praise bestowed upon this variety of sweet corn by eastern cultivators is well merited, and that it loses none of its good qualities by growing at the west, I feel confident in recommending it as worthy a place in every kitchen garden. It grows to a much larger size than ordinary sweet corn, and in productiveness will compare with the best field crops. Under favorable circumstances, not less than two large well-filled ears are found on almost every stalk—often three or four, and sometimes as many as eight.

When prepared for the table, the ears, large, plump and luscious, are both pleasant to the sight, and exceedingly grateful to the palate. In fact, to genuine lovers of green corn, it is almost indispensable. With the earlier varieties of garden corn, (this being rather late,) green corn may be had from July indefinitely; for when left standing, it retains its richness and fine flavor till killed by frost.

Another advantage claimed for this variety is, (I have not tested it,) that it may be kept green and fresh all the year round. For this purpose the ears should be gathered when fully ripe, the husks tied close at the silk end to prevent drying, and then kept in a cool, dry place.

It also yields, when planted close, a large amount of excellent green fodder. The stalks being almost as sweet as sugar cane, are relished by all kinds of stock, and if well cured the fodder is nearly equal to the best hay for winter use.

And now, Mr. Editor, I will close this article by saying to the numerous readers of your excellent journal, that I will send by mail post paid packages of the above to any address, on the receipt of two postage stamps. J. S. STONE.

Olivet, Eaton Co., Mich.

Cost and Profits of Certain Crops.

BY JUSTUS GAGE.

MR. EDITOR:—In closing up my farm accounts for the past year, I have arrived at facts sufficient for the following table, showing the comparative cost per acre, and the cost per bushel, &c., of raising the different grasses, grains and vegetables named therein; also, the comparative net profit per acre of the same, as well as the net per cent profit on the value of the land, rated at $25 per acre, upon which they were grown:

	Cost per acre.	Cost per bush	Net profit per acre.	Net per cent per acre.	Market val. per bushel.
Wheat, on clover sod fallow,	$11 77	$0 67	$10 60	$42 00	$1 25
Wheat, on corn stubble,	8 30	79	4 70	18 60	1 25
Corn,	8 15	24	8 35	33 00	40
Potatoes,	23 00	19	39 00	150 00	50
Clover & Timothy,	3 60	76 p.r.t.	8 92	35 00	$10 pr.t.
Redtop and marsh hay,	3 30	3 00 "	4 20	17 00	7 "

NOTE 1st.—My farm is composed of oak openings—soil, sandy gravely loam.

2d. The wheat on fallow ground was raised on clover sod, plowed when the clover was in blossom, and cross-plowed just before seeding. A portion of it was manured from the barn yard, and the whole sowed with plaster, at the rate of half a bushel per acre, previous to the first plowing. The ground was not harrowed at all. I used the clod crusher and seed drill combined, in seeding—and put on at the rate of one bushel of good red wheat, (Mediterranean,) to the acre.

3d. The corn stubble ground was plowed immediately after removing the corn—about the middle of September. It was then rolled; then seeded with the drill as above, at the rate of one bushel to the acre, of good white wheat, (one part of it Soule's, the other blue-stem.) The whole was harvested by hand, in the usual way, and thrashed by machinery. The white wheat was damaged by the fly, to the amount of 1-4th of the crop. The red wheat was not affected by the fly. In order to ascertain the comparative profits of these two fields, we should add to the corn ground wheat, the net profits per acre of the corn crop grown upon that field during the time the other was in fallow—$6 04, and the estimated damage by fly, say $1 50 per acre, and we shall then have $12 24 as the net profits per acre for that field, against $10 60 net profits per acre from the summer fallow field, which is $1 64 per acre in favor of summer fallowing with a corn crop, even when the ordinary summer fallow has been prosecuted under the most favorable circumstances.

4th By net profits in the above table, is meant a clear profit over all expenses in raising the crop and fitting it for market, and the interest on the land at 7 per cent.

As anything of this sort, however small, in addition to the small amount of well ascertained facts existing in the farming community, has an interest and a value, I have ventured to lay the above before your readers.

Dowagiac, Mich., March 10, 1856.

Wire Fence, Cattle Stables, Hydraulic Ram.

At Chelsea, a few weeks since, we made the acquaintance of Wm. J. Davidson, Esq., who resides in the town of Sylvan, nearly two miles from Chelsea. We found Mr. D. to be one of those sociable, jovial, pleasant men, who always make one feel at home in their company. We were solicited to go with him to his residence, and take a bird's-eye view of some of the fixtures on his premises. Having yielded to the solicitation, we proposed to Mr. D. to take the lead, for he drives fast horses. We started in pursuit with our Charley, over the snow banks and through drifts, but could hardly keep in the wake. We soon hauled up at the mansion. Our attention was first drawn to the wire fence, which we examined as well as we could, with the depth of snow. Mr. D. has now *four miles* of wire fence completed, with a ton of wire on hand for more fence. He uses No. 9, iron wire—from three to six strans, through posts set from eight to thirty feet apart, varying according to the use intended. Around the house, barn, garden and fruit yard, the posts are nearest together, but around the large fields they are from twenty to thirty feet distant. He says his fence is perfectly reliable, to fence out horses, cattle and hogs. The expense of the fence does not average over seventy-five cents per rod, made in a substantial manner. There should be no half-way manner of making wire fence, if you intend to succeed. At suitable distances from each other, there is attached something like a swivel with a screw connected, with which, by means of a wrench, the strans can be strained as tight as need be. It is his intention to paint his fence with common paint, or with coal tar, which promises to be a cheap and durable paint for barns and out buildings.

Mr. Davidson has fitted up one of his barns with very convenient stalls for cattle. The stalls are divided by scantling, two inches by four, from four to twelve inches apart. Each stall is four feet by eight, with a door to each in the rear; a bar is placed across the door-way, to prevent the cattle from crowding back and bursting the door open. The stalls are destitute of rack, manger or feeding-trough. Each ox or cow's head is next to the barn floor; the stalls and floor are separated by a board partition, perhaps four feet high—through which an aperture is made, in the form of a triangle, with the angle down to within about twelve inches from the floor. The cattle soon learn to put their heads through this triangle to their fodder, and when done, withdraw their heads, either to stand at ease or to lie down. Mr. D. claims for this plan, that it is impossible for them to waste any hay or grain. It undoubtedly has that advantage, and also an advantage over others, for with this no tieing is necess ,, and the cattle always stand at ease.

Mr. Davidson has another very important appendage to his premises—one which saves much time and labor. We allude to the hydraulic ram, which furnishes a constant supply of water for the house, barn, and for irrigation when necessary. Hundreds of farmers have equal advantages with Mr. D., for procuring water in the same way, at an expense of from twenty-five to fifty dollars. Hydraulic rams can be obtained of Mr. Wilkinson Brown, Ypsilanti, who will put them in operation.

Mr. Davidson has had much to do with horses in former years, and considerable experience as to the kind of barn best adapted to keeping horses in good health, and has promised an article on that subject, which we hope will be forthcoming for one of our Spring numbers.

Mr. Davidson informed us that at our next visit, we might expect to find on the posts of his gateway, in front of his dwelling, what we will call a gate-plate, having his name engraved in legible characters, so plain and large that it may be read by the traveler on the road. That is a good idea, and we hope his brother farmers will adopt the same plan, and relieve the traveler from the perplexing task of inquiring repeatedly to find certain individuals. Mr. Davidson has under cultivation a large farm, but owing to the depth of snow, we could not make the observations we desired, which we will omit till some future time. N.

Transplanting Trees.

Mr. Editor:—As April is the month to transplant trees, I wish through the *Farmer* to say a few words about ornamental trees. There is nothing a farmer can have that will add so much to the beauty and value of a farm, as a nice road with a beautiful row of trees the whole length of the farm. Most men want proof; here it is. Seven years this spring, I took from an old slashing, one hundred sugar maple trees and set them by the road side, one every two rods. They are now from four to five inches in diameter; they make a splendid appearance. The whole cost does not exceed $15. I would not have them destroyed for $200. This is good stock, and growing at the rate of 25 per cent. Maple trees should always be second growth, in order to flourish in the open field. Trees should be mulched the first season with coarse manure. Trees planted in this manner will live nine out of ten. He that planteth a tree is a benefactor to his race. Jas. Clizbe.

Quincy, March 17, 1856.

☞ We received the Report of the Committee on Essays too late for insertion in this number. It will appear next month; also an article from the Grand Haven Times, descriptive of Mason and Oceana counties, and some other articles which we had marked for this number.

Horticultural Department.

S. B. NOBLE, EDITOR.

Deterioration of Apples.

The Editor of the *New York Horticultural Review*, after copying our article on the deterioration of apples, assigns as a reason "The unnatural distention of the fruit, induced by extraordinary fertility of the soil." Now this may be true in many instances, but we have noticed the same decline on poor as well as on rich soil. We were lately shown at the residence of Smith W. Bower, Esq., Superior, some superb specimens of apples, Northern Spy, Baldwin, Bellflowers, and other varieties, which were sound and fine, showing no signs of decay—we judge they would be good keepers. They were grown on strong, stiff clay soil. This is the only instance we have noticed of apples that appeard to be keeping well. We think in this instance some peculiarity of the soil had more influence than its fertility.

The Editor also says, "The Farmer also remarks that the first year's fruit of a tree, discloses all the peculiarities belonging to its variety." We did not intend to be understood so, for we remarked, that with our Spy's, they were the first year's fruit of a tree forced into bearing by high cultivation, and on the 15th of December, they had matured and were decaying. Our orchard, when first beginning to fruit, was as highly cultivated as now. From our observation of facts, we judge some other cause operates to deteriorate the fruit, than the fertility of the soil. We hope the subject will be investigated, the cause known, and remedy applied.

Grafting.

Grafting to succeed well, should be well and expeditiously done, the best of tools used—the knife ought in all cases to be sharp.

Cherries can be grafted in March, or early in April. Plums and apricots, may be done in April, on either tame or wild plum stocks; if the latter are used, insert the scion very low that it may take root.; apple on its own stock; pears on pear stocks if they can be had; but for the want thereof, take a thrifty apple seedling, into which put the pear, so low that it will take root as they usually do the first year; the second year *remove entirely* the apple stock, then you have a fine pear on its own stock. Pears *never* do well to remain on apple more than one year.

Quinces may be grafted on quince or thorn, and like the pear should be set low on thorns to take root.

Grafting wax made in the following manner is about right for ordinary seasons, but the tallow may be varied to compare with the temperature of the air when used:—take equal parts of tallow, beeswax and rosin, melt and turn into water, and when cool, work like shoemaker's wax. This may be applied as made, or melt, and dip into the liquid old calico, and when cool, tear into strips an inch wide, and use. This is a very convenient way to apply the wax.

Cultivating Orchards.

The success of raising a good thrifty orchard, depends much upon the manner the soil is cultivated. In all cases, we have observed that the more the soil has been stirred by hoeing and plowing, the more thrifty the trees have been, and consequently come sooner into bearing. In a part of our orchard we have been for years in the practice of raising seeds, by planting cucumbers and squashes, and setting out seed beets, carrots, parsnips and cabbages, rotating with corn and dwarf peas and sometimes potatoes. On that part thus cultivated, the apple trees have always grown better, and are now larger than on the other part, which has been seeded a portion of the time. Any crop that requires the soil to be frequently stirred is unquestionably the best for an orchard. A plow should never go near enough a tree to break a root, and the old mode of trimming high for that purpose, is fast going into disuse, and will soon be numbered among the things that have been. Let the ground be carefully cultivated under the trees, with hoe and spade, and kept mulched with straw or long manure. The soil well cultivated with hoed crops, having been made and kept rich, the orchard will be thrifty, provided good trees were properly set.

Raising Vegetables.

No definite rule can be given as to the time vegetables may be safely sown or planted in the spring. There are several kinds that are hardy and may be sown early, among which are asparagus, onion, parsley, parsnip, peas, rhubarb, and salsify. These may generally be sown as soon as the ground can be worked, either in March or April. Beets, cauliflower, cabbage, carrot, celery, cress, lettuce, radish, and turnip, are such as are denominated half hardy; and should not be sown till the soil has become partially warmed. Beans, cucumbers, squashes, melons, peppers, pumpkins, and tomatoes, and other tender plants, ought not to be sown till settled warm weather.

Beets for winter, need not be sown till the 10th of June. Cucumbers for pickling, from the 1st to the 15th of June. Cabbage for winter, about the middle of May. Egg plants are *very tender*, and should be raised in a hot-bed or not sown before the first of June.

In April, peas and potatoes may be planted, and if the soil is warm, lettuce, carrots, and beets may be sown for early use only. Celery is a tardy seed to vegetate, and may be sown this month, covered lightly and partly shaded until up.

Flower Gardens.

The cultivation of flowers has always been a delightful occupation in all countries, by the aged and the young, and the flower garden a pleasant place of resort; either to view the wonderful works of God, or to wile away a few moments of time, after a day of care and perplexity, labor or toil. It is a retreat from the bustle of the world, which almost every one wishes to enjoy, and the weary traveler, as he passes along takes pleasure, as he casts his eyes to a well cultivated flower garden, not only by what he himself observes, but in the reflection that a whole family is made happier, and home a place of enjoyment.

The soil of a flower garden should be made rich and mellow, finely pulverised. Its beauty in a great measure depends upon the manner in which it is laid out and its being kept clean and neat. The style may be varied from ovals, squares, and oblongs, to triangles, circles, and diamonds. It need not be large, but should if possible be protected from cold bleak winds.

On the corners, and along the borders of the flower beds, may be planted different varieties of perennial and biennial flowering plants, also compartments for tuberous and bulbous roots. On the beds may be sown annuals, which, with the perennial and bulbous, will furnish a succession of flowers, from spring till fall.

In April, may be sown the most hardy annuals; the perennials transplanted, and divided, if you wish to increase. In May, sow the more tender sorts; cover lightly and in proportion to the size of the seeds. Keep the earth moist, not wet; for flower seeds are many of them very small, and if covered deep will rot, and if too shallow may dry too much to vegetate. Trailing plants, should be tied to trellisses, or neat rods.

A Chapter on Autumn Apples.

Golden Sweeting is not cultivated hereabouts within my knowledge. My trees have borne but one crop. Promises well, but does not equal the following, either in size or quality. Season, September.

Summer Sweet Paradise is also new here. It bore the past summer, a small crop, on a very young tree. Should it maintain its character, and prove a good bearer it must become very valuable. Season, September.

Honey Sweeting. This fruit was imported from central New York, about twenty years ago, by Mr. Jeremiah Scott; but as so fine a fruit would hardly have remained unknown to the pomological world, I am led to suppose that this may be only a local name. In order to lead if possible to its identification, I subjoin a description of the tree and fruit as far as I can from memory.

Tree, a vigorous upright grower, with reddish brown bark and serrate leaves. A moderate bearer every year. Fruit large, flattened conical; color pale yellow with a red cheek; flesh white, very tender, juicy and rich. Stews so easily that it may conveniently be mixed and cooked with sour apples for sauce, &c. Ripens through September, and the beginning of October.

Spiced Sweeting is much cultivated here. The tree is a good grower, and the fruit, on light soils, is large and fair; but on heavy soils it is apt to be smaller, and affected with black spots, or scabs. Its peculiar aromatic flavor will always insure it a place in the grounds of the amateur.

Jersey Sweet has borne two crops, ripening rather early in September. It fully sustained its character as a first rate sweet apple. It bears very young.

Late Strawberry is not disseminated. My trees are just in bearing, but the experience of the first season is not sufficient to warrant an opinion of its merits. It promises well here, and stands high in western New York.

Duchess of Oldenburg, a Russian fruit, is one of the most valuable cooking apples I know. My trees have borne two crops. It promises to be one of the best and earliest bearers I have. Not disseminated here. September.

Porter. This apple is extensively disseminated in this region, and is esteemed the best and most profitable of its season. It is universally known here as the Golden Pippin. While ignorant of this fact I imported trees as Porter from Zera Burr, of Perinton, New York, which have shown fruit. Any one, on examination of the outlines and descriptions given by Downing on the one hand, and by Thomas and Elliott on the other, will discover, especially in the outlines, a difference so marked as to indicate a difference in the origin of the fruits from which they were drawn; that of Downing being longer and more regularly conical, while that of Thomas is more inclining to ovate, and approaches somewhat the outline of Yellow Bellflower as grown here. I am informed that Mr. Burr obtained many of his varieties from Downing, and the fruit of the trees obtained from him, agree very closely with Downing's outlines and description; while the common Golden Pippin of this region, which is recognised by our Detroit pomologists, and the State Fair Fruit Committee, as the true Porter, agrees equally well with the outline and description of Thomas and Elliot. The two are about alike in size, but cannot be mistaken for each other; and the difference in flavor is still broader; that of Downing being much milder. The color of the exposed side also is fainter, more diffused, and slightly marbled. Both are alike excellent. Season of each the same. September.

Alexander is a new fruit with us. Just in bearing. Needs another season to display its qualities. Said to be good for *show* and for cooking. Season, from October to November.

Daniel is a large, subacid, greenish brown, ovate fruit; very tender and good. Tree a rather slender, spreading grower. Season, September.

Gravenstein is just in bearing. It is large and fine; a very showy fruit, and a vigorous tree; though hardly equal in flavor to Porter, which covers part of the same season. Said to last till November, but this year ripened in September.

Fall Pippin is extensively cultivated, and universally esteemed the best of its season. With us it keeps well till January without especial care. Too well known to need particular description.

Holland Pippin is so similar in tree and fruit to the above, that the two are seldom distinguished. It varies chiefly in its time of ripening; being perhaps a month earlier. In season from August to October.

Striped Gilliflower is considerably cultivated. It is a showy, late autumn fruit, of the largest size, and of moderate quality.

Keswich Codlin has borne two heavy crops. It is not esteemed for eating; but with us it has no superior for cooking, as it stews well and makes a good sauce, even when but half grown. It bears very young and abundantly. Ripe in September and October. Not disseminated.

Dyer has now borne. It is a fair sized, fine looking fruit, of exceedingly rich, high flavor, and with me, has borne very young. The narrow folded leaves, and grayish brown bark, characterize this variety Season October. T. T. Lyon.

Effect of the Winter on Fruit Trees.

Sir:—I write you this note merely to suggest to orchardists and amateurs, to report through the medium of the Farmer, the effect which the present severe winter has had on fruit and ornamental trees, stating the nature of the soil and situation. Such reports may be of great advantage to us in succeeding years, in enabling us to select varieties sufficiently hardy to withstand our rigorous climate; perhaps it may tend to throw some light on some of the diseases to which our fruit trees are liable, and which are but ill understood; for instance, blight in pear and peach, bursting of the bark in cherries &c. It is too early yet to say with certainty (perhaps not till midsummer,) what the real amount of damage may be, or whether it extends to the apple or not. Among my pear trees I find that Seekel, Louise bonne de Jersey, Beurre Diel, English Jargonelle, Flemish Beauty, Beurre de Aremburgh, Vicar of Wakefield and Madeline, are dead to the snow; some of these are large trees and all on pear stocks. Dearborn Seedling and White Doyenne may possibly live by severe pruning. Plums, Washington, Jefferson, Lawrence's Favorite, Coe's Golden Drop, and some of Smith's Orleans of considerable size, are also dead to the snow; a number of varieties I have not yet examined; there are some varieties that show signs of life in the trunk. Frost Gage, Prince's Yellow Gage and some seedling peaches of every variety are dead in the main branches so far as I have examined. Cherries; Knight's Black, Downton, Yellow Spanish, Napoleon, Biggareau are dead; Kentish Morello, not affected; Plumstone Morello, slightly, and all others more or less. I will report more fully at some future time.

John McAllister.

Summerville, Cass Co. March, 1856.

On Girdling Trees.

Editor of Michigan Farmer, Dear Sir:—In the September number of the Farmer, I noticed some enquiries about girdling timber and getting rid of the same, also some Editorial remarks on the same subject which infer that winter or spring is the best time to girdle timber. To this I have some objections which, for the benefit of those interested, I would like to make public through the Farmer.

There are many things to be taken into consideration in girdling timber, of which merely the getting rid of the timber is of minor importance. One very important thing is the subduing of the land and bringing it from its wild or natural state into a state of cultivation. Now any one at all experienced in breaking up new land, knows that land is much easier subdued when broken up in the month of June, or the first of July, than at any other season of the year, and the same principle holds good in regard to girdling timber. At the time of the year when the sap circulates most freely in all kinds of timber, if it is suddenly checked as by girdling, it causes a greater amount of fermentation and a more effectual decay in the roots and fibers extending in the ground to a considerable distance around the tree. If timber is girdled at a time of the year when there is no sap circulating in it, there is nothing to promote the fermenting process with the required activity, and the roots in the ground remain undecayed for a long time, and the soil for some distance around the tree is sour and unfit for assimilation with all kinds of vegetation. I consider therefore the most proper time to girdle, is when the leaves on the timber have acquired one half or two thirds of their full size, which generally occurs (especially on oak openings) about the last of June.

These few hints on this subject have been suggested by observation; if any of your scientific men have a better theory, I should like to hear from them through the columns of the Farmer.

Yours, in the hope of getting information,

J. Davis.

White Swan, Feb. 15th 1856.

The American Pomological Society.

SIXTH SESSION.

In conformity with a resolution passed at the last meeting of this National Association, the *Sixth Session* will be held in CORINTHIAN HALL, in the city of ROCHESTER, New York, commencing on WEDNESDAY, the twenty-fourth day of September next, at 10 o'clock A. M., and will continue for several days

Among the objects of this meeting are the following: To bring together the most distinguished Pomologists of our land, and, by a free interchange of experience, to collect and diffuse such researches and discoveries as have been recently made in the science of Pomology—to hear the Reports of the various State Committees and other district associations—to revise and enlarge the Society's catalogue of Fruits—to assist in determining the synonymes by which the same fruit is known in America or Europe—to ascertain the relative value of varieties in different parts of our country—what are suitable for particular localities—what new sorts give promise of being worthy of dissemination—and, especially, what are adapted to general cultivation.

The remarkable and gratifying progress which has been attained, of late years, in this branch of rural industry, is, in no small degree, attributable to the establishment and salutary influences of Horticultural and Pomological Societies. It is, therefore, desirable that every state and territory of the Union should be represented in this convention, so that the advantages resulting from this meeting may be generally and widely diffused. Held, as it will be, at a convenient point between the Eastern States and the Western, easily accessible from the South, and also from the Canadas, it is anticipated that the attendance will be larger than on any former occasion, and the beneficial results to the American farmer and gardener proportionably increased.

All Pomological, Horticultural, Agricultural, and other kindred associations of the United States, and of the British Provinces, are requested to send such number of delegates as they may deem expedient; and nurserymen, and all other persons interested in the cultivation of fruit, are invited to be present, and to participate in the deliberations of the convention.

In order to increase as much as possible the utility of the occasion, and to facilitate business, members and delegates are requested to forward specimens of fruits grown in their respective districts, and esteemed worthy of notice; also papers descriptive of their mode of cultivation—of diseases and insects injurious to vegetation—of remedies for the same, and also to communicate whatever may aid in promoting the objects of the meeting. Each contributor is requested to make out a complete list of his specimens, and present the same with his fruits, that a report of all the varieties entered may be submitted to the meeting as soon as practicable after its organization.

Packages of fruits and communications may be addressed as follows: "FOR THE AMERICAN POMOLOGICAL SOCIETY, care of W. A. REYNOLDS, Esq., Chairman Committee of Arrangements, Rochester, N. Y."

Delegations will please forward certificates of their appointment, either to the above, or to the undersigned at Boston.

Gentlemen desirous of becoming members of the Society, and of receiving its Transactions, may do so by remitting to the Treasurer, THOMAS P. JAMES, Esq., Philadelphia, Penn., the admission fee of two dollars, for *biennial*, or twenty dollars for *life* membership.

MARSHALL P. WILDER, *President.*

H. W. S. CLEVELAND, *Secretary.*
BOSTON, MASS., MARCH 15, 1856.

The Household.

"She looketh well to the ways of her household, and eateth not the bread of idleness."—Proverbs.

EDITED BY MRS. L. B. ADAMS.

The Farmer Boy.

BY L. B. A.

I saw a stripling farmer boy
In spring, his calves and lambkins feeding,
And gently forth each pleasant morn
The well-fed cows and horses leading,
He fondly stroked their glossy coats,
And they, as if in grateful joy,
Gave their rich milk, and bowed their necks,
Obedient to the farmer boy.

I saw him bending o'er his plow,
The rich, dark furrow smoothly turning,
And with the sweat upon his brow,
His bread by honest labor earning.
Though idlers scoffed at his coarse garb,
To him their mocking little mattered,
As, with strong hope and sinewy arm,
Broadcast the golden grain he scattered.
When summer came, the idlers starved,
Too proud to beg, or ask employ,
While the rich harvest gave its sheaves,
To crown and bless the farmer boy.

I saw him when the autumn winds
Came whistling round his homely dwelling,
And falling leaves, and dreary skies,
Full soon of wintry tempests telling.
But he had cords of choicest wood
Safe from the sleety rain-storm pouring;
His well-housed cattle in their stalls
Felt not the bleak winds round them roaring.
With in the cot his aged sire
Welcomed his coming steps with joy,
And bade his daughters spread the board
With bounteous cheer to greet his boy.

I saw him when to manhood grown,
His name by all with praises spoken,
His sire's broad acres all his own,
His lightest word a bond unbroken.
Now idlers at his riches stared,
And wondered at his stores of knowledge;
They knew he once wore home-spun clothes,
Were sure he'd never *seen* a college!
They knew not of the book-shelf broad,
Against the cottage wall suspended,
Nor dreamed that to those volumes worn
He owed his wealth and mansion splendid.
Honored and blessed by good and great,
His books are still his chiefest joy,
Since they have raised from lowly state
The humble, stripling farmer boy.

Our Door Yard.

George is quite delighted with the March number of the *Farmer*, and takes great pleasure in referring me to the letter of your experienced friend on the cultivation of door yards. Now, though true to my woman's nature in liking to have my own way in matters concerning my personal comfort and pleasure, I trust I am neither stubborn nor unreasonable, and therefore when George says, "Does Mary *smilingly acquiesce?*" I reflect that as our ground is entirely new,

and not the levelest spot in the world, it would probably be best in the end to give it up to potatoes this year, and I say so frankly. If this decision pleases your friend half as much as his advice delighted George, he will be well repaid for writing. I cannot say that I fancy the prospect this summer, but hoping that patience and obedience will in time have their reward, I give up the door-yard to George and his plow and cultivator for the present, and turn my attention to other things. We have a fine, sloping, sunny place in the rear of the house, for a vegetable garden, and all the time I can spare from my household duties can be spent profitably there; and pleasantly too.

A homeless boy, about thirteen years old, wishes to live with us and go to school; he is to assist me about the house and garden, nights and mornings, and as he is very industrious, I think we shall manage to raise a good variety of roots and vegetables for summer use. I know there are ways of preparing many summer vegetables for winter use, and shall be glad if,in the season of them, some of your experienced correspondents would give a young housekeeper some directions about drying, preserving or curing such as cannot be kept in their natural state.

MARY OF THE WOODS.

[A part of "H. L. Y's" letter, which we are obliged to leave over, is exactly suited to Mary's wants. We will publish it next month.]

Economy in House-Keeping.

[In order to make room for the following practical, but rather lengthy letter, we have been obliged to omit a few of the recipes, and will give them in a future number, when they will be quite as timely as at present. Meanwhile, we welcome "H. L. Y." into the household, and trust she will not be backward in speaking her opinion on any subject where she is as capable of giving instruction as she evidently is in matters of house-keeping.]

I have several times taken up my pen to sketch a little for the Farmer, and have as often laid it aside, leaving the pages to be filled by those more skilled in writing, while I have tried to be content to throw the shuttle, to ply the needle, or spin the even thread from the silken fleece.

The monthly visits of the *Farmer*, with us, are hailed with joy. It is like the coming of an old friend, and on its arrival the first thing I do, is to sew it firmly, cut the leaves apart, and then turn to the Ladies' Department, to get some good advice, some practical hint, or some useful recipe, with which I often find it well stored. Yet, though it is so ably filled, I am again tempted to take my pen, and, like Elisha, "to show you mine opinion also." I wish to say a few words to young house-keepers, and to those who expect or hope to become such.

To begin at the beginning: let every house-keeper, if she can, have a spot of ground somewhere, though it be small, that can be cultivated as a vegetable garden. Have it near the house, in a sunny spot back of it, as you want the front for flowers and shrubbery. See that it is well supplied with manure of some kind, unless it is new land, in which case it will answer very well for one, and perhaps two years, without manuring. Have it properly planted with vegetables most necessary for domestic use, and be sure that it does not run to weeds during the summer. Have a strawberry bed, by all means, if you can spare the ground, if it is not more than ten feet square; take good care of it, and it will pay you ten fold in delicious fruit. A few rods of ground, judiciously managed as a garden, will supply a small family with all necessary summer vegetables, besides leaving a share for winter use, with which every house and cellar should be stored, both for economy and health.

In catering for the table, study variety; not to have a great many dishes at each meal, but have a change. You can serve up the same kind of food in different forms. It is with the taste as with other senses—it tires of sameness. I think two or three dishes, with the necessary accompaniments, with or without dessert, are enough for any table. I would not recommend rich pastries at any time, and but little warm bread or biscuit, either for health or economy; and nowhere in the house is economy more necessary than in the kitchen. We should economise our time there, too; by so doing, one woman will accomplish in one day more than another would in double that time, who does everything hap-hazard, just when she happens to think of it, if she does not forget again. See that every step counts. Do everything at a proper time, keep everything in a proper place, and you will avoid confusion. When you go about getting breakfast, do not let the potatoes get half done before you cut the meat, for then they must either spoil by being over-done, or get cold in waiting, or the meat must be fried to a crisp to be done in time. It is a good plan to have the potatoes ready the night before hand, if possible, and put them and the meat to cook about the same time, setting the meat on the back of the stove, especially if it be fresh or lean; then you can spread the table, and have time to bake the buckwheat cakes and have them fresh when you sit down.

When you want to get tea in summer, do not build a rousing fire and put the tea-kettle on, before you gather the berries and make the biscuit or griddle cakes, and have the fire burn out and the tea water boil half away, thus wasting wood, water and time.

In washing dishes, be careful never to drop the knives and forks into the water; it spoils the handles. Cinders from a black-smith's shop will give the knives a fine polish.

An excellent dish for tea or dessert can be made by taking two cups of sour milk, half or two-thirds of a cup of cream, soda, thicken with canell or coarse flour, until nearly stiff enough for griddle cakes; then break into it two eggs, thicken with flour, and bake to a light brown; make a gravy of milk, with a little sugar and butter, thickened with flour; lay the cakes in a deep dish, a layer of cakes, and cover with gravy, until you have done; send immediately to the table.

Asparagus or peas, cooked with plenty of gravy and poured over biscuit, dry bread or toast, makes a good dish. Also, tomato toast is relished by lovers of that fruit, and is a cheap, as well as a wholesome dish. Fruit and vegetables are more easily digested than animal food, and should therefore be used more freely.

An economical house-keeper can make use of crusts of bread in various ways, so that no one would suppose they had ever been dry bread. Soaked in milk, they make excellent griddle cakes, by adding a little sour milk, soda and flour; or it can be put into bread, raised and baked the second time. A loaf of dry bread soaked over night in new milk, then tied in a bag and boiled two or three hours, according to the size of the loaf, makes a nice dessert, served with sauce. If your bread sours before baking, set it by in a cool place; it will make good biscuit, with the addition of a little cream or butter, and soda or saleratus.

The care of milk is an important item in house-keeping. The pans should be thoroughly cleansed, scalded in clean water, wiped with a cloth, and dried by the fire before being put away for use. Cream should be taken off before the milk gets very sour, as the acidity of the milk diminishes the quantity of the cream, and destroys the flavor of the butter. In cool weather, when the cream becomes firm, and the milk is not thick, just take a knife and break the cream from one side of the pan, and pour the milk out, leaving the cream in the pan; it is much quicker done than the common method of skimming, and you get more cream, as the soft, under part does not get mixed with the milk.

Every house keeper should have some place, an old salt-barrel will do, where all the bones and pieces of refuse meat can be thrown, with lard or tallow scraps, sediments that accumulate in lard wherein cakes are fried, and all kinds of refuse grease. This should all be carefully saved for soap. If dirty, it can be cleansed by boiling it in weak ley. Soap should be made as early as consistent in the Spring.

The old way of washing, with soft water, soap and good rubbing, is about as sure as any way I know of; yet, there is a method I sometimes make use of, and it is the best I have ever tried. That is, borax dissolved and mixed with soap, at the rate of about one ounce of borax to three quarts of soap. Heat the soap and mix it well, soak the clothes in cold water over night, make a suds in the boiler in the morning; wring the clothes and put them into the suds cold, let it stand on the top of the stove, if you have much fire, and heat slowly; when near boiling, take the clothes out, suds and rinse well, and hang them up; unless *very* dirty, they will not need much, if any, rubbi

When you wish to shrink unbleached cloth, do not boil it, but put it into scalding water, and let it stand a while; it will bleach much sooner than if boiled. All unbleached goods should be shrunk before making. Do not tear cotton cloth when you want to make it up; cut it—it will take a little time, but you will more than save that in making; besides, the work will look much better.

Thread made of fine cotton yarn, carefully doubled and twisted, is much cheaper than spool, and just as good for many uses—such as mending, basting, &c. The skirts of dresses, after the sleeves and waist are worn, will *pay* to make bedding, if not cut too small when piecing. Be sure to keep knitting work on hand; keep it in some convenient place, and improve the spare minutes in preparing clothing for the feet.

Do not practice working late at night if it can be avoided. Retire early, that you may have sleep when nature requires it, and then you will be prepared to rise early. Day-light is cheaper than candle-light, and a good snuff of morning air and a water bath are more invigorating than patent medicines or a morning nap.

I have thus briefly hinted at some of the small, but not unimportant items in the daily and annual round of domestic duties. Small as they may appear, they help to make up the vast whole of the ceaseless routine of duties that devolve upon her who takes upon herself the responsibilities of house-keeper. I have written about them because, being small and apparently trifling, when abstractly considered, they are usually passed over by more capacious minds. Many will exclaim, as they read, "Well, I always knew all that!—why not tell us something new?"

If you do know and practice it, I am glad. It is not to you, then, that I write. But there are many who have not had the opportunities you have enjoyed. Many girls, in these days, go direct from the school room to take charge of the kitchen, and know little more about the economical management of a house, than an Icelander does about sweet potatoes. It is for them I write, and if I succeed in giving them one right idea or useful suggestion in regard to domestic affairs, I am fully compensated. H. L. Y.

Rural Hill.

ANSWER TO ENIGMA 1.—STABLE. *Solutions*: Salt, tea, beat, least, beasts, last, tease, tales, table, stale, Abel, Elba, bleat, slab, state, taste, late, bale.

Answered by "Willie J.," of *Lima*; "K. A. M.," of *Washington*; "Geo. W. Rider," of *Genoa*; and "Mary E.," of *Ann Arbor*.

MICHIGAN FARMER.

ROBERT F. JOHNSTONE, EDITOR.

DETROIT, APRIL 1856.

What Our Duty Is.

We have several anonymous and signed communications on hand, which we wish to dispose of with a few remarks. Some of these are relative to Horses, some Beehives, and some concerning other matters of interest to agriculturists, but more especially to the writers. First, in relation to horses and the horse controversy: We would ask some of those who find fault with us for opening our columns to this subject, how are the merits and demerits of horses to be known without criticism and discussion in the public journals? The controversy commenced with a criticism of the action of the Committee on horses of all work at the State Fair. Its action was canvassed, as it should be, in our columns, with the design of showing that its decisions were of so much importance to the interests of agriculture, that any mistake or omission, whether intentional or accidental, could not be made without creating feelings that would tend to injure and derogate from the efficiency of the State Society. If the action of any committee be open, and free from all personal or private bias, even though in the opinion of the best judges it may not be correct, it need not fear criticism or discussion. The breeding of horses is an important division of farm work, and one which is attracting the attention of the farmers of this State more and more every day. Every attempt to aid the improvement of the farming horses in this State, should be encouraged; and now that the subject has been broached, and there is shown a disposition to canvass the merits of the several families, as best fitted to produce the kind of horses that are the most profitable, we say "go ahead." We have no interest in any animal, beyond the general desire to call attention to their merits as beneficial to those most interested in raising profitable stock, that will pay the best on the farm and in the market. This is all the interest we mean to have, and in discussing the merits of Jackson, and Abdallah, Messengers and Morgans, the main question must not be lost sight of, and that is, *what kind of horses shall the Michigan Farmers raise, with a view to profit*, with respect to size, gait, form, action, temper, color and blood?

This is a question of agricultural economy, that is open to all. Let it be canvassed fully, without reference to the merits of this horse, or that stock, and without personal allusions, and it will be of much use. The first-rate horses in this State are not by any means so numerous that any jealousy need be felt, at the introduction of more of them. We, therefore, conceive it to be our duty to promote temperate and well considered discussion on the subject.

With regard to inventions and agricultural machines, we are at all times ready to publish well-authenticated experience concerning them, especially when it comes from parties who are not interested in their manufacture and sale. To these latter our advertising columns are always open, and that is all they should ask. But sometimes we are asked for a great deal more. Patentees or their agents are often exceedingly anxious to dictate to us what we shall publish, and we have now a letter before us threatening prosecution should we publish the letter of a correspondent, who having tried an invention and found it worthless, writes disparagingly of it. Of course, we care very little for these threats, and we shall most likely publish both letters next month. But in the meanwhile, it must be distinctly understood, that while we shall refrain from speaking with harshness of any inventor, or disparagingly of any machine, our first duty is to disabuse the public of any false or highly colored impressions which it may be for the benefit of interested parties to excite, relative to the profits or economical value of the articles which are from time to time endeavored to be thrust upon the farming community. It is our place to find out from the best authority, whether or not an implement or an invention, or a plant or an animal, is really worth the money to the practical, working farmer, that he is required to give for it; and if it is, or is not, to say so. That is what our duty is, to our subscribers; and if patentees, seeds-men, stock-breeders, horse-men and implement-makers are not satisfied, we cannot help them out of their dilemma.

☞ Since our last number was issued, the editor of the Horticultural Department has sustained a severe affliction in the loss of a cherished and only daughter, who has fallen a victim to consumption. We are sure our readers, and those with whom Mr. Noble has become acquainted during his many travels throughout the State, will sympathise with him in this dispensation, which has removed one from his family who deserved all that parental love and care which he lavished upon her.

Clover.—Mr. Editor, Sir, I find there is a difference of opinion among farmers about the kinds of red clover, some contending there are three kinds, the June, medium, and large; and others, that all the difference is in the soil. I wish to get the largest kind to turn under; if any one has that kind, and has had experience on the subject, I wish them to speak through the *Farmer*. A. H. H.

Berlin, March 26, 1856.

To Whiten the Hands.—Take a wine glass of eau de Cologne, and another of lemon juice; then scrape two cakes of brown Windsor soap, or the same quantity of pure white soap, to a powder, and mix well in a mould. When hard, it will be excellent for whitening the hands.—*Miss Hall's Book.*

Wool.

We perceive that the question of re-adjusting the duties on imported wool, is again before Congress. Last season about this time, we called the attention of wool growers to this subject. We again invite their attention to the question, which is simply, whether the wool grown by the United States would bear higher prices, with or without the duty on foreign wool. The farmers of Michigan are deeply interested in this question. Wool, especially the finer qualities, is one of the chief productions of the State; and whatever affects its value, is felt by the farmer immediately, and of course, more or less in all the departments of the commerce of the State. In considering the results of any change of the existing law of Congress, we have to look upon them solely from the position of the producer or farmer, and hence, the first question which would arise, would naturally be, whether the proposed change would increase or decrease the prices of wool. The change asked is that the duty should be taken off all imported wools, on the ground that such abrogation of the present duties levied on wool, would increase our home manufactures, and thus increase the consumption and demand for our home grown wool. This sounds very well in theory, but it may well be doubted whether such would be the result. There is not any wool of the United States now sent abroad, nor is there any demand for it. The British manufacturers are supplied from Germany, France and Australia, with all they can consume, at less rates than they can buy from us, and should the duty be taken off, the whole of the surplus would come in direct competition with the wool grown in the United States, and would most certainly have the effect of depreciating its value. If the woolen manufacturers cannot compete with the foreign in our home markets, let us have an increase in the duties on woolen manufactures, brought into the country. They are really only so much raw wool brought into the United States, in the form of bales of cloth, instead of bales of wool, and there is no good reason why wool in a manufactured shape should not pay as much duty as that which comes into the country in a raw state. It militates just as much against the interest of the wool grower. One of the arguments put forth by those who seek the change, is, that by permitting wool to be imported free, it puts the manufactures of the country upon an equality with those of other countries, and hence they would be more able to command a market for their goods, by being enabled to sell at prices as low as those of the imported. But we doubt if these would meet the difficulty, or have any tendency to keep up the prices of wool. In fact, the more strife there would be to drive each other out of the market, the lower the prices of the goods would become; while, as a matter of course, the producer would feel the effects of the low prices just as much as he now does, because there is little or no manufacturing going on. So far as regards the wool interest, we think it surely is much better to retain the present duty as it is, and to increase the rate of duty on the manufactured article, if there must be a change. Meanwhile, let the farmers themselves look at the question as one in which their interests are deeply concerned.

Plaster.

A correspondent propounds a series of questions relative to plaster or gypsum, which are as follows:

1. How does plaster operate, to be of advantage to a crop?

Plaster operates beneficially on certain crops, because of its chemical powers to dissolve and set free certain elements, necessary to promote the growth of the crops to which it is applied. For instance, plaster has been found by actual experiment, to absorb and decompose certain compounds of ammonia, and thus to set it free, rendering this valuable element into a state in which it is readily taken up by the growing plant. It also operates beneficially by fixing and retaining the ammonia which is brought down from the atmosphere by rain or heavy dews, and its effects are therefore more readily perceptible where it has been applied in dry weather, and rain has fallen immediately after.

2. Is it beneficial to all crops?

There are few crops in our dry climate that plaster does not benefit. But plaster is peculiarly beneficial to clover and peas, as the ashes of these plants are found to contain a large proportion of sulphates, and plaster is itself a sulphate of lime.

3. Does clover especially require it?

Yes; there is no crop to which it is of so much importance; and the luxuriance it promotes, is felt in the succeeding crops.

4. When is the best time for sowing?

When it is sown on grass lands or on clover, it may be applied in the spring as soon as vegetation has fairly started. The practice of the farmers in this State is to sow it on their wheat in the spring We see it stated, however, that very beneficial effects to the wheat crop have been found to follow the application of a heavy dose of plaster in the fall; and this is not improbable, when we consider that the snow which falls during the winter, contains a large amount of ammonia, which the plaster would fix and render available to the crop, instead of leaving it to be dissipated again into the atmosphere, as the snow melted; and a full supply of ammonia is of the utmost consequence to the growth of wheat.

5. How much is required for an acre?

We have known it to be applied in quantities equal to four bushels to the acre. The general practice, however, is to sow it at the rate of a bushel to a bushel and a half per acre.

ANOTHER RICHMOND IN THE FIELD.—We call attention to the advertisement of F. E. Eldred's Horse, Hambletonian, in the present number. Mr. Eldred is not discouraged by the loss of the noble animal Jackson, which he introduced into the State, and which, we understand, has left some colts in this neighborhood that already show from what stock they are sprung. Hambletonian is one of the most splendid horses we have seen, and it will be seen by his pedigree, comes from stock of the best blood. He was a great favorite as a stock getter in Washington county, New York, where he was raised, and the certificates which accompany the advertisement are reliable.

ABDALLAH CHIEF.—The spring season of this fine animal has commenced. The pedigree accompanying the announcement has been verified. The discussion to which his merits have been submitted in this periodical, has directed much attention to him as a stock getter. In size, color, action and form, all agree that he is a very superior animal; and at the east where his stock has been tried, his colts stand in high esteem among horsemen. He has not been in this State long enough to have given us the opportunity to judge, but we have no doubt he will make his mark.

A GOOD FAMILY NEWSPAPER.—The Philadelphia *Saturday Post*, one of the best family newspapers printed, has put off its oversized, inconvenient folio shape, and come out in a more campact quarto form. The quantity of reading matter is increased, and other improvements introduced, which make it more valuable than ever as a family paper. Mrs. Southworth, one of the most popular romance writers of the day, is a regular contributor to its columns.

Childs & Peterson, Philadelphia, Pa.

☞ "Dick Sherwood" shall have a hearing next month.

☞ We have received several notices of the new tuber which is attracting so much attention as a substitute for the potato. Among others, a small pamphlet from W. R. Prince, of Long Island, who has gone into the cultivation of the root with all the impetuosity of a violent enthusiasm. We have passed through so many of these fevers, and have seen so many of these agricultural capers, that we are not inclined to advise a full reliance on all the statements which have been made. Yet at the same time, we would not discourage any from making a trial of what is new. There is much testimony from foreign sources in its favor, principally, however, from France. How it would succeed in this country, either as a tuber to aid in the feeding of man or stock, is yet untried. It is not, therefore, known from actual experiment, whether our climate or soil would suit it, or whether even if found to grow successfully, it could be turned to a profitable use after it had been grown.

EMERY'S MACHINES.—We call attention to the advertisement of Emery's Horse power and Thresher. This variety of power is about one of the handiest machines which a farmer can have; and Mr. Emery, who is naturally of a most inventive turn, has given much time and attention to rendering his Power as perfect as possible. As we know him and his machines well, we can speak from experience of them, and take much satisfaction in commending them to the attention of farmers.

MANNY'S REAPER AND MOWER.—The season for selecting Reaping and Mowing Machines, is at hand; and though our friend Manny himself has departed to a clime where there is no need of his inventions, yet his successors are carrying on the business of constructing them, with as much vigor as ever. The success which attended the exhibition of this machine at Paris last fall, has given it a reputation which must be very advantageous, and will reward the enterprise, which caused such a triumph to American skill as that which was awarded in the very critical trial to which his machine was submitted.

☞ Among the Reapers offered for sale, which have become quite a favorite in this State, we point to Seymour & Morgan's, as justly entitled to very favorable consideration. Of the merits of Ketchum's Mower we need not speak. Every one who has tried them, states that they would not be without them for twice the price.

AUTOMATON REAPER.—This is a most wonderful piece of mechanical skill, and with the improvements i it manufacture which have made it much more efficient, and less liable to get out of order, it is gaining on the public. Its ability to lay the gavels of grain quite ready for the binder, and the clean manner in which it does its work, render it a very desirable reaper.

☞ Among the notices of horses lately received, we have a very glowing description from the pen of "Leo," of a very perfect animal, which is named Peacock Morgan, owned by Messrs. Carr and Gilbert, of Manchester, in this State. The writer, describing his many excellent qualities, speed, docility, beauty of carriage, gracefulness, and mildness of temper, winds up with the exclamation, that Vermont is a great horse state, which produces the fastest trotters, and that of all the stock, the Morgans, are the most renowned, and of the crosses between the Sherman Morgans, and the Gifford Morgans, "Peacock Morgan is the miracle."

☞ It may be well to remind correspondents that it is necessary we should know the real names of writers. We have several communications, with fictitious signatures, which contain grave charges; and refer to persons and affairs which we cannot interfere with, as it would make us responsible for matters of which we have no personal knowledge, and about those of which the writers are mistaken. If we do not publish them therefore, the writers will understand why we do not.

Certificate for Davis' Platform Bee Hive.

We, the undersigned citizens of the county of Lenawee, State of Michigan, have no hesitancy in recommending to the patronage of all bee-keepers, Mr. Sylvester Davis' Patent Bee Hive, as we have used it and pronounce it the best hive by far we ever used or have seen used. His security against the millers, his mode of transferring, his feed, &c is unsurpassed.

Azariah Ellis, Ridgeway.	Ja's Wheeler, Jr., Ridgeway.
Asel Russel, Macon.	Justus Lowe, Ridgeway.
Richard Cadmus, Macon.	Dan Miller, Ridgeway.
Harris Aldrich, Ridgeway.	Sanford House, Ridgeway.
W. R. Wilson, Ridgeway.	Cyrus Saviers, Franklin.
Joseph Pilbroun, Ridgeway.	G. D. Perry, Franklin.
John Asner, Ridgeway.	A. J. Hunter, Franklin.

The Markets and the Prospects.

The present prospect of the market for grain is not promising. For the past two months it has become more and more evident that the high prices of flour and grain could not be sustained; and that if the efforts to establish peace by the belligerant powers of Europe should be successful, the decline would not only be permanent, but depressing. The convention now holding at Paris, has given to the friends of peace much encouragement, and consequently, the decline has been more rapid of late. At the sailing of the last steamer, flour in Liverpool which had been quoted at 41s, to 43s, six to eight weeks previous, is now held at 32s to 33s, being a decline of nearly $3.00 per barrel. Wheat, in the same market which had been held at 12s, to 13s. per bushel, is now ranging from 10s. to 10s. 6d. These quotations show how produce is going. The supply at New York appears to have been fully equal, if not superior, to the demand for the past winter, while the shipping trade has been very light. This has left many of the storage places in the interior and along the lakes with a full winter supply untouched. We are informed that the ware-houses and storing places along the Central N. Y. Railroad, are full and almost running over, with flour and grain waiting for navigation to open. The farmers last fall, in many of the wheat growing States, did not push their grain into market previous to the close of navigation. The experience of the two previous years had shown that the highest rates were obtained in the spring and summer after navigation opened; and as the market last fall was one in which the high prices were not sustained, it was very natural that the wheat growers should retain their grain at least till spring. There is, therefore, a large amount of produce on hand, not only in this State, but also in Indiana, Illinois and Wisconsin, that will keep the market well supplied, even with an active foreign demand, until the new crop is secured and ready for market. The price of flour in the New York market now ranges from $6.75 to $8.00; and it takes about $1.75 to pay Railroad freight upon it. Lake freights, it is generally thought, will rule low during the spring, after the first trips. In this city but few sales have been made, and it is difficult to realize over $5.00 for flour now. Wheat cannot be sold at over $1.00 to $1.12½ per bushel. Corn is selling at fifty cents. Oats at 37½. Butter is scarce, and wanted at 20 to 22 cents. Cheese sells readily at 12½ to 14 cents. Eggs are rather plentier, and sell at 20 cents per dozen. Cattle are selling at $3.00 to $3.50, live weight. Hogs are $6.50 per 100 pounds. Sheep in carcass sell at 6 cents per pound, and on foot the rates are rather better, being worth $3.00 to $4.00 each according to quality. Poultry, none offering. In seeds the market is beginning to be active. Timothy is worth $2.75 to $3.00. Clover sells at $6.50 per barrel. Redtop is quoted at $1.75 per bushel. Plaster is worth one dollar per barrel, for Oswego, $1.50 for Grand Rapids, and Ohio sells at $7.00 per ton.

There is a fair prospect that wool will maintain better prices during the next season. We notice that the demand for the better kinds, both in England and on the Continent, is fully up to the supply, and in our own markets it is generally understood that last year's clip has been well worked up, though there is still on hand a fair supply. In the New York market of last week, Saxony of a choice variety sold for sixty cents, and Merinoes range from thirty-five to fifty cents, according to grade. There has been some large purchases made during the winter, and while the Railroads were in order, shipments were made east. The rates range from thirty-five to thirty-seven and a half, for three-fourths and full blood Merino fleeces.

THE MEDICAL INDEPENDENT.—We have received the first and second numbers of a new Journal, devoted to the promotion of Medical interests. It is edited by Drs. Goadby, Kane and Robinson, and as its name implies, is designed to give all systems a fair notice, without regard to what old practitioners regard as necessarily conservative. This Journal has been received with marked favor, so far.

SOWING PLASTER.—We see that it is suggested, that it is a good plan to mix plaster with leached ashes, that are a little damp, before sowing. The dampness of the ashes brevents the plaster dust from being so troublesome to the sower. When ashes are not at hand, damp earth, or sand, might be used with good effect.

Meteorological.

REVIEW OF THE WEATHER FOR FEBRUARY, 1856.

BY L. WOODRUFF, ANN ARBOR.

Thermometer at.....	7 A. M.	2P. M.	9 P. M.
Highest temp. in month.....	32° (11th)	42° (22d)	31° (26th)
Lowest do do	19 (19th)	1 (12th & 13th)	17 (13th)
Average.....	9 3	23.5	14.2

Monthly mean.....15.7

MONTHLY VARIATIONS.

Greatest daily mean,.....	35.6° (11th)
Least,.....	9° (13th)
Greatest daily range,.....	44° (19 h)
Least,.....	6° (25th)
Clear days.....	11
Part Clear,.....	3
Cloudy days,.....	15
Days on which rain fell,.....	none.
Total amount of melted snow,.....	92 inches.

WINDS.

W., 8 days; N. none; E., 1; S., 1 day; S. W., 9 days; N. W., 6 days; N. E., 3 days; S, E., 1 day.

REMARKS

The weather of this month has been much more variable than that of January, though sometimes of almost equal severity.

A cold term commenced on the afternoon of the 1st, and on each of the five succeeding days the temperature sank to from 1 to 14 degrees below zero The 12th and 13th were remarkably cold days, the highest temperature of each being only 1 deg. above zero, though the sky was cloudless, and there was little wind. On the 11th it thawed in the shade, for the first time since Dec. 22d, and on the 19th there was a rapid rise in temperature, and the weather continued rather mild throughout the last ten days of the month. About 10 inches of snow fell during the month, and the average depth on the 29th was about 18 inches.

The lowest barometer was 28.28 on the 16th, and the highest 29.51 on the 6th, the range being 1.23 inches.

Below are the means of temperature, &c., for the season ending Feb. 29th, 1856. The results for the two preceding winters may be found on page 119, vol. XIII. of the Farmer.

Mean temperature of the winter at

7 A. M.	2 P. M.	9 P. M.
13.4	24.6	16.7

Mean of season.....18.2

Total amount of rain.....5.283 inches

Enigma—2.

I am composed of 15 letters.
My 8, 11, 1, 6, 15 is a vegetable production;
My 9, 13, 4, 6, 5, is bright;
My 3, 14, 6, 7, is to temper;
My 8, 6, 12, 2, is a kind of cloth;
My 15, 11, 7, 14, 5, is a governor;
My 3, 12, 13, 1, 10, 6, 11, is an animal of Northern India.
My whole is an officer of the war of Independence, to whom History has not done justice.

Enigma—3.

I am composed of five letters.

My whole is an island in the Mediteranean Sea; transposed it becomes an article of ladies' dress; erase the initial, a place where a great battle was fought appears; erase the final, restore what was erased, transpose again, and a preparation of grain appears; erase the initial, a term in music appears; erase the second letter, a preposition remains. M.

☞ The parties interested in Abdallah Chief, claim that they have a right to be heard through our advertising columns, as we have already published the challenge of Messrs. Crippen & Smith, and ask that we shall call attention to their challenge, which we have printed on an additional leaf for this month's Farmer, so that it may not interfere with our regular issue. As this request is reasonable and fair, we have felt that just ice to all parties compelled us to comply.

☞ We have on hand a communication, criticising the right of the State Executive Committee to change the award made by the Awarding Committees at the State Fair. The instance brought up, is that which was made by the Executive Committee on the case of the mare to whom the first premium was first awarded, and then taken away, and given to a colt, under the plea that the award was a mistake. It is claimed that the Committee should either have gone farther, and changed the whole range of premiums, or that really they had no right to make such a change at all, unless such power was reserved to them —as it interfered with the rights of other parties. The writer says:

"There were many competitors for the first premium for mares of four years old and over, and it was withheld from all but Mr. McCrea, and while he was allowed to stand in the way of all other competitors of this class of entries, and having upon record no other higher than *second*, the Committee have assumed without authority, and without a pretence or excuse, to give Mr. McCrea $5.00 more as "first premium for his colt," while the records of the Society show that D. G. Brown, of Nankin, received the "first premium of $5.00 for colt." Thus showing the whole proceedings a complete farce; while Mr. Brown has already pocketed his $5.00, awarded to him by the viewing Committee, the treasury is again opened to a favorite for another grab of the same amount, thus duplicating the "first premium" upon colts, and withholding a "silver medal" from A. Fisher, of Redford, who stands, by the decision of the viewing committee, before all others entering in this class, except Mr. McCrea, and would be entitled to a silver medal and "$12.00, the first premium on mares of four years old and over," if Mr. McCrea was not.

And here let me inquire whose colt came off best? and was entitled to the greatest meed of praise from the Society? The viewing committee say Mr. D. G. Brown, and the executive committee say John McCrea.

"And who, by the rules of the Society, are to decide? Are there any provisions for two "First Premiums," for any *one* class of animals entered? And let me further inquire, why this favored colt, (which does not appear, from the records or reports of any of the proceedings, to have even been entered or exhibited upon the fair ground) should have been thus fraudulently forced into the front ranks? was it the engineering of some person interested in the ownership of Abdallah or Jackson, whose colt it might be? or was it the handy work of the owner of the Green Mountain Black Hawk, seeking laurels clandestinely for a colt whose appearance failed to recommend itself?

A. GILMORE'S
PATENT BEE HOUSE AND HIVE:
PATENTED JUNE 5TH, 1849.

THE subscriber having purchased the right of GILMORE'S BEE HOUSE and HIVE for the counties of

WAYNE, OAKLAND, AND MACOMB,

is now prepared to sell

INDIVIDUAL RIGHTS

with a book of instructions for building House and Hive, and the management of bees, for five dollars.

A liberal discount to clubs for town rights.

The plates and descriptions are plain, giving the length, width, and thickness of each piece of timber, so that any carpenter can build the house and hive from the book. With this Bee House and Hive, any individual can have the bees perfectly under his control, and obtain the surplus honey without the destruction of the bees.

A. M. BODWELL.

Ann Arbor, March 20, 1856.

N. B. Agents wanted for selling rights in every town in the above counties. April, tf

BILLY BOSTON
WILL STAND FOR MARES

the coming season, at the stable of Chas. A. Jeffries, in the township of Dexter, Washtenaw county. Terms $15.00 to insure a foal. Billy Boston is a thorough bred horse of superior style action and endurance. He was sired by Old "Boston," the sire of the celebrated Horse Lexington, and is as good blood as any Horse in America.

Good pasturage furnished for mares from a distance, on reasonable terms. CHAS. A. JEFFRIES.

Dexter, Washtenaw Co., Mich. Apr4t.

SEEDS, SEEDS, SEEDS!

D. O. & W. S. PENFIELD are receiving their spring and summer assortment of Field and Garden Seeds, among which the following may be found:

Clover,	Foul Meadow,	Australian Wheat,
Timothy,	Millett,	Rye,
Red Top,	Tuscany Wheat,	Poland Oats,

Buckwheat, and a choice selection of Seed Potatoes. A full assortment of Shaker Garden Seeds, warrant'd fresh and the best in the market. 103, Woodward ave., Detroit. Feb. 56 [5m]

SEYMOUR & LONG,
CARRIAGE, WAGON AND SLEIGH MAKERS.

KEEP constantly on hand, Light Wagons and Carriages, Open and Top, of their own manufacture, of the most improved patterns. All who are in want of such would do well to call and examine our assortment before going elsewhere. Prices satisfactory, and terms easy. SEYMOUR & LONG.

Battle Creek, Mich. Nov. 10th, 1854. dec6m

D. O. & W. S. PENFIELD,
PLOWS, DRILLS AND HARROWS.

WE are now prepared to furnish the farmers and merchants of this State with any and the best Agricultural Tools brought to this market, and in any quantity, having the most complete stock in the west, amongst which may be found: Starbuck Plows, Trojan do; Ruggles, Nourse & Mason's do; Eddies' Harrow, and all other kinds of do; Seymour's Cultivators and Seed Drills; Emery's do; Hand Seed Drills, Garden Drills, Peckham's Cultivator; Cruner's do; Flower's do; Ketchum's Mower and Reaper; Seymour & Morgan's do; also, a full assortment of Hoes, Forks and Rakes. A full assortment of Agricultural Tools.

Orders from the country promptly attended to.

103 Woodward avenue, Detroit, M. Feb '56. [5m]

OSIER WILLOW.

THE subscriber has for sale cuttings of Osier Willow, at $10 per thousand. They will be packed and delivered at Coldwater, Mich., directed as desired.

Also Cranberry Vines, in large and small quantities to suit purchasers.

Price 25 cts. per square foot. L. D. HALSTED.

Coldwater, Feb. 18, 1856. March, '56, 3t

MERRILL, POWERS & CO.,

MANUFACTURERS OF

Stone Pipe for Conducting Water, Gas, Sewerage, &c.

THE above Pipe is manufactured from a superior article of Potters Clay, glazed upon the inside with an *extra superior* article of pure clay. (Which in the process of burning forms a coat of pure glass.) Is then burned so that it is harder than the hardest granite rock, will conduct water miles and discharge itself just as pure as when it leaves the spring, neither earth, water, gas, frost, or acids, of any kind have any effect upon it whatever; will stand a pressure of at least 500 feet head. It is made in joints of about 2½ inches in length, with a tenon on one end, and a socket on the other; is laid in a good article of water lime cement, which becomes stone of itself after remaining in the ground say 30 days.—Below we give prices per rod at the factory.

For 1 inch calibre		$1,12½
" 1¼ "	"	1,25
" 1½ "	"	1,50
" 2 "	"	2,00
" 2½ "	"	2,64
" 3 "	"	3,30
" 4 "	"	4,62

All orders or communications in relation to the above pipe addressed to AKRON, or MIDDLEBURY, Summit Co., Ohio, will receive prompt attention.

Middlebury, Summit Co., Ohio, Aug. 8'55. [sept.1y]

FRUIT TREES
FOR SALE AT THE
Jonesville South Nursery.
Jonesville, - - - - - Michigan.

I have a few thousand PEACH TREES, one year from the bud, leading varieties, fine, from two to six feet high. A few thousand APPLE TREES, hardy GRAPES, &c. The apples include most of the choice varieties cultivated; from three to four years old, and propagated from *well-known bearing trees*. All fruit trees warranted *true to the label*.

Also fifty thousand OSAGE ORANGE shrubs two years old, *extra fine*.

Standard prices at the nursery, and 25 per cent. additional when delivered JOHN T. BLOIS.

Jan. 1 '56-3t

NEW PATENT

CORN PLANTER

THE above implement has been thoroughly tested and pronounced the best now in use in any part of the world. The planter was exhibited for competition at the great trial of Agricultural Implements, at Geneva, N. Y., July, 1852, and was awarded the first premium of $10.00 and a diploma, and gave universal satisfaction. In 1853 it was awarded the first premium at the World's Fair in New York. Its superiority over other planters consists in its smoothing the ground and pulverizing it before it deposites the seed. Then it deposites ashes, plaster, lime, bone dust, or any kind of fine dry manure with the seeds in any desired quantity, and at the same time covers it with fine earth at an equal depth. It is adapted to most all kinds of seed except potatoes. One acre of ground can be planted with it in one hour. Eight acres is an ordinary day's work for a man, boy and horse. Where corn is planted with the planter, it can be cultivated through the season in the most perfect manner, with right mangement, for the price of one day's work of a man, boy and horse per acre with the **Corn Planter.**

The said implements will be furnished to order, to any person in the State of Michigan, **warranted to work well,** if properly managed, by the subscriber, who owns the right in the State of Michigan. **Price, Twenty Dollars.**

☞ This Corn Planter was awarded the first premium at the last Michigan State fair, and a diploma was awarded it at the last fair. JAMES ANDREWS.

AGENTS FOR PLANTERS.—Geo. M. Osborn, Ypsilanti; G. W. Platt, Niles; D. B. & G. C. Burnham, Battle Creek; Moses Rogers, Ann Arbor; J. W. Hulin, Jackson; Cook & Thomas, Kalmazoo.

CERTIFICATES.

We, the subscribers, have used Woodard's improved Corn Planter, manufactured by James Andrews, of Pontiac, from one to three years, and most cheerfully say that it supersedes all planters we have seen in operation;—that one man, boy and horse can plant from eight to fourteen acres per day with ordinary labor, and cover the seed with moist earth, and do it better than it can be done by hand, and the earth does not dry up in dry seasons on sandy land as when planted with the hoe. It smoothes the ground and deposites the seed on an even surface and in a line, in hills or in drills. We can cultivate the corn with less labor than when planted with the hoe; it scatters the corn in the hill. More and larger ears will be produced and it will be much easier husked. It drops lime, plaster and ashes, in any desired quantity. One day's labor with one man, boy and horse, will mature one acre to a good and perfect tillage, with proper management.

C. D. Woolcott	Farmington
Elisad Smith	West Bloomfield
Joshua Simmons	Livonia
Wheeler Smith	Farmington
A. C. Walker	Farmington
G. H. Murray	Farmington
B. Wixom	Farmington
Moses Smith	Hawley
Wm. Young	Hawley
C. C. Wald	Pontiac
O. C. Morris	East Bloomfield
Theoren Flower	Pontiac
Henry Waldren	Pontiac
Wm. McCullough	Milford
Samuel Foster	Ann Arbor
Stephen Mills	Ann Arbor
St. Clair Bean	Jackson
Cook and Thomas	Kalamazoo

We hereby certify that we have used Woodadr's Improved Seed Planter, manufactured by James Andrews, of Pontiac, from one to three years. I and my neighbors planted eighty acres of corn last spring. I can safely say that on dry land, my corn yielded from five to twelve bushels of corn per acre more than my neighbors did that planted the usual way with the hoe. My corn did not suffer with the drouth as my neighbors' did, consequently my corn did not dry up before ripening as was the case last year, and in 1853. I can plant from eight to ten acres per day with one man and horse and plant it better than it can be planted with the hoe. The corn will come up evener, and in consequence of the seed being deposited on a smooth surface and the corn scattered in the hill. I am satisfied of its being one of the greatest improvements in the culture of growing corn that has ever been introduced in Michigan. I can plant and till my corn, (say when the ground has been properly fitted to receive the seed,) within the amount of one day's labor spent with one man, boy and horse, per acre, to mature the crop, and make good and perfect tillage.

Joseph P. Martin	Ypsilanti
Henry Birge	Pontiac
Daniel Whitfield	West Bloomfield
W. Randal	Waterford

Mr. Andrews, Sir:—Your Corn planter which you sent me, works well. Corn come up well. Have planted 80 acres; can plant 14 acres per day, and do it better than by hand. JAMES CONKLIN.
Battle Creek, June 30, 1854. jan'56-6m

PURE BRED STOCK FOR SALE.

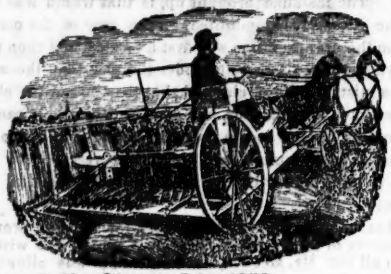
THOROUGH BRED DURHAM CATTLE, Pure Bred French Sheep, Pure Bred Spanish Sheep, and Pure Bred Essex Pigs and Suffolk Pigs. Apply to J. S. GOE,
Tippecanoe, Fayette Co., Pa., 4½ miles East of Brownsville.
April, 1856. aply*

ATKINS' AUTOMATON:

OR

SELF-RAKING REAPER AND MOWER,

THE BEST MACHINE IN USE.



1 (the first) used in 1852.
40 used successfully in 1853.
300 in twenty different States in 1854.
1200 in all parts of the Union in 1855.
3000 building for the harvest of 1856.

THERE ARE SIX GOOD REASONS FOR THIS unparalleled increase and great popularity: 1st. It is strong and reliable, and easily managed. 2d. It saves the hard labor of of Raking. 3d. It saves at least another hand in Binding. 4th. It saves shattering, by the careful handling in raking; besides, the straw being laid straight, it is well secured in the sheaf, and does not drop in the after handling, and the heads are not exposed in the stack, so that the GRAIN saving even exceeds the LABOR saving. 5th. It is a good Mower, being one of the best convertible machines in use. 6th It has a knife that does not choke.

Its other excellencies, too numerous to mention here, are fairly given in the circulars. Its intrinsic worth is also attested by the award (mostly in only 3 years,) of

OVER 70 FIRST PREMIUMS!

PRICE.—REAPER AND MOWER, $200—$75 on its receipt, $75 first September, and $50 first December. Price of SELF-RAKING REAPER only $175. Considerable saving in freight to those at a distance, who order prior to 1st March; also, liberal discount for advance payment.

To secure a Machine, order immediately. Though so little known the past season, and none ready for delivery till 1st May, yet not two-thirds the customers could be supplied. The reputation of this Machine is now widely established, so that THREE THOUSAND will not as nearly supply the demand as twelve hundred did last year, and we shall also be selling four months earlier.

☞ Order early, if you would not be disappointed.

PAMPHLETS, giving IMPARTIALLY the OPINIONS OF FARMERS, together with orders, notes, &c., mailed to applicants, and prepaid.

☞ Write to us at CHICAGO, (Ill.,) DAYTON, (Ohio,) or BALTIMORE, (Md.,) which ever is nearest to you.

J. S. WRIGHT & CO.
"Prairie Farmer" Works, Chicago, Dec. 1, 1855. ap4m

CHINESE POTATO, or Dioscorea Batatas.

Imperial Rice-white Variety, Genuine, Sound, of American Growth, in parcels of $5 and $10 each, in tin cases that go safely by Express.

JAPAN POTATO, or Dioscorea Japonica,

(Entirely distinct,)—$18 per 100.

AS THE SUPPLY is limited, orders must be prompt, with cash enclosed, and the tubers will then be sent immediately, or retained and sent later if desired, either dry or growing in small pots. A Treatise on Culture, &c., therewith.

N B.—There are no other Chinese Potatoes for sale in the State, and recent advertisements are a fraud on us, and a fraud on the public.

Also, the following in quantities, at the lowest rates: Lawton's New Rochelle, Imperial, and other Blackberries; the finest Grapes, Raspberries, Gooseberries, Currants, Cranberries, most splendid Strawberries, and fine Rhubarb. Osier Scions, best kinds, $2 and upwards per 1000 Licorice and Sumach Plants, Fruit and Ornamental Trees, &c.—an unrivaled collection.

Priced Catalogues sent to applicants.
April, 1856. 1t WM. R. PRINCE & CO., Flushing, N. Y.

POLAND OATS.

THE SUBSCRIBER will be prepared to answer orders for the above variety of Oats, after the first of January. They will be delivered at the Depot at Kalamazoo, for $1 50 per bushel, and 25 cents for each bag. Orders containing directions where to send to, must be written *plain*, and prominent intermediate points between places of forwarding and destination given, if beyond the State. Kalamazoo, Mich., Dec. 12, 1855.
jan'56-tf MOSES KINGSLEY.

The Trotting Stallion

HAMBLETONIAN

Will stand for Mares the ensuing Season, commencing May 1st, at the following places:

At Farmington, at Swan Tavern, Monday, Tuesday and Wednesday of every alternate week during the season; at Grosse Isle, same days of the following week; and on Thursdays and Fridays of every week, at the Stable of Geo. Gregory, Fort Gratiot Road, Chain Farm, adjoining the first Toll Gate, one mile from the City Hall, Detroit; and Saturdays at Windsor, Canada West.

Terms, $10 the Season; $16 to Insure.

Season money to be paid when the mare is first served, or a good note given for the amount. Persons parting with Mares before foaling time will be held responsible for the season Money. All Mares not regularly returned, will be holden by the season. All accidents and escapes at the owner's risk. Pasture furnished at 50 cents a week. Season to close on the first of August.

PEDIGREE OF HAMBLETONIAN.

HAMBLETONIAN was sired by George Barney's Horse, HENRY, of White Hall, Washington County, New York—he by SIGNAL, out of a MESSENGER Mare. Hambletonian's dam by MAMBRINO; Grand Dam, Bishop's HAMBLETONIAN. Hambletonian is 15½ hands, weighs 1150 lbs.; possessing fine action, with great powers of endurance; untrained, but shows good evidences of speed, which will be shown to the Judges at the next State Fair. Hambletonian is a beautiful blood bay, black mane, tail and limbs, without a white hair upon him, and for style cannot be excelled by any horse in the State.

Geo. F. Gregory, Agent. **F. E. ELDRED.**

HAMBLETONIAN.

TO THE FARMERS OF MICHIGAN.

Sandy Hill, March 1st, 1856.

We, the undersigned, are well acquainted with the above named horse Hambletonian, now owned in Detroit, by F. E. Eldred. He was raised by W. A. Moore, Esq., of Fort Ann, Washington county, State of New York. We are well acquainted with his stock, and we hereby certify that they are of large size, good color, great style and fast travelers, kind and gentle, sell quick and bring high prices. And we further say he is one of the best Blooded and best Stock Horses we ever knew. We are sorry he has left this part of the country.

Harden Bailey,	W. S. Alden, Kingsbury,
Orville Griffin,	William Baker,
Daniel Griffin,	J. S. Rice, Fort Ann,
Joseph Campbell,	K. J. Weaver, Fort Ann,
Chas. E. Harris, Kingsbury,	Bloomer Underhill,
E. Smith, Smith's Basin, N. Y.	John C. Blaisdell.

White Hall, January 21st, 1856.

George Gregory—Dear Sir:—I received yours of the 10th inst. The Stud Horse raised by Wm. A. Moore, of Fort Ann, was sired by my horse Henry, better known by the name of the Barney Horse, and I further say he was out of one of the best mares in the State of New York. He is a bright bay with a piece of his tail cut off. I further say his stock has proved to be very good. I owned some of them and have seen quite a number of them, and they are of the first class horses.

G. BARNEY.

Glenn's Falls, March 9th, 1856.

I hereby certify that the above named horse, Hambletonian, was raised by my father, W. A. Moore, and was sired by G. Barney's horse, of White Hall, Washington County, New York. Hambletonian is out of one of the best mares I ever knew, and is a first rate stock getter.

ANDREW H. MOORE.

To F. E. Eldred, Esq., Detroit, Mich.

Sandy Hill, Washington County, New York, March 1st, 1856.

Dear Sir:—As to your horse Hambletonian; I have known him from a colt. He was sired by George Barney's Horse, of White Hall, Washington county, New York, and is out of one of the best mares that ever stepped foot in Washington county, and I consider him the best blooded and stock horse I ever knew, and had I had my thoughts about me, instead of helping Gregory purchase him, I should have purchased him myself. It is as much loss to the breeders of good horses here, his leaving, as the death of Jackson is to the breeders of Michigan. If any one doubts his blood or his being an extra stock horse, if they ever come this way and will call on me, I will show them not a few, but a great many colts sired by him. They are blood bays, large size, great style, open gaited, and nothing but practice wanting to make them fast trotters. They carry their heads and tails clear in the air, and their owners put on a price still higher.

W. S. ALDIN.

To F. E. Eldred, Esq., Detroit, Mich.

Sandy Hill, Washington County, New York, March 1st, 1856.

Dear Sir:—You ask my opinion of your horse, Hambletonian. In reply, would say, I have known him from a colt. I have owned three of his colts all beautiful blood bay horses. I sold them for high prices. One of the three could trot very fast—could trot his mile in less than three minutes; one was a horse of fine style, sixteen hands high, carried himself high and could trot his mile in less than four minutes to a heavy wagon. I sold him for four hundred and fifty dollars, about one-half his worth. Hambletonian is one of the best stock horses I ever knew, and had not Gregory said to me he wanted the Horse for himself you would never have owned him.

Yours, &c.,

B. F. HOAG.

To F. E. Eldred, Detroit, Mich.

NEW PRINCIPLE! NEW REMEDY! NO POISON!

RHODES' FEVER AND AGUE CURE.

FOR THE PREVENTION AND CURE OF

Fever and Ague, or Chill Fever, Dumb Ague and other Intermittent and Remittent Fevers, also, for Billious Fevers, accompanied by Typhoid Symptoms, Typhoid Fever, Yellow Fever, Ship and Jail Fever, General Debility, Night Sweats, and all other forms of Disease, which have a common origin in MALARIA or MIASMA.

The diseases are common to many localities of the United States, but wherever they prevail, North, South, East or West they all equally spring from the same miasmal cause. The great variety of symptoms and forms of disease is owing principally to differences in age, sex, constitution and habits of the sufferers; but as the cause is the same, they will all equally yield to a remedy that is competent to overcome or remove that cause.

By the laws of nature, every principle has its opposite, and for every disease, or cause of disease, there is a re-agent, or in other words a specific remedy. All Malaria, whether arising from marshes, stagnant water, Decomposition of Animal and Vegetable matter, or even newly cleared lands, is the same in character and effect: is a poison floating in the atmosphere, causing disease to all who breathe it. In accordance with those unalterable laws governing the unerring affinity subsisting between opposites, there is in the preparation before us, offered to the public.

THE NATURAL ANTIDOTE TO MALARIA,

which neutralizes the poison whenever it comes in contact with it, even in the open air, and when taken internally completely purifies the system affected by it of its baneful influence, and thus restores and preserves health.

The remedy is believed to be entirely new, and unknown to any but the Proprietor who distinctly claims the following extraordinary results from its use:

It will instantly check the ague in persons who have suffered for any length of time—from ***one day to twenty years***; and by continuing its use, according to the directions, a radical cure will be effected, the patient continuing free from the complaint for years.

In its operation on the poison in the system, it will immediately relieve all the distressing symptoms of billious or ague diseases, and when the disease is cured it will entirely prevent the accession of

GENERAL DEBILITY AND NIGHT SWEATS,

which so often follow the administration of other medicines. The patient at once begins to recover appetite and strength, and continues to improve until restored to perfect health.

By its use fever and ague may be banished from every family and class in the community; farmers, mechanic, and all laboring people may be using this article as a

PREVENTIVE,

and pursue their respective avocations in perfect safety from ague, or billious attacks during the sickly season, which is often to them the most valuable part of the year.

Since the introduction of the CURE in every part of the United States, its success has been so complete and unvarying as to have fully proved these assertions in favor of its extraordinary merit.

When these declarations were made at the date of its introduction, they seemed incredible to many, even of the most candid minds, because all the resources of science had been taxed in vain to subdue Ague sufferers, all their remedies or treatment, whether scientific or empirical, have been limited to the use of poisonous and destructive drugs, such as Arsenic, Quinine, Mercury, Strychnine, &c. The effects of these are sometimes worse than the disease they subdue, and when such remedies fail, or give only temporary relief, their poisonous effects are only superaded to the poor sufferer's first complaint.

On this account, ague sufferers should be particularly careful about using any secret Fever and Ague remedies, notwithstanding the makers of them uniformly assert that they may be taken with perfect safety, even when it is notoriously well known that their potency depends solely upon destructive poisons.

Now, as a proof that the Remedy is not only valuable on account of its powers to cure disease, but that it is also

WORTHY OF PUBLIC CONFIDENCE

BECAUSE OF ITS

SINGULAR AND ENTIRE HARMLESSNESS.

The following certificate from one of the most celebrated chemists in the United States, has been obtained, and a copy of it is attached to every bottle:

NEW YORK, June 11, 1855

I have made a chemical examination of "RHODES' FEVER AND AGUE CURE," or "ANTIDOTE TO MALARIA," and have tested it for Arsenic, Mercury, Quinine and Strychnine, but have not found a particle of either in it, nor have I found any substance in its composition that would prove injurious to the constitution. JAMES R. CHILTON, M. D., Chemist.

It is a stubborn fact, therefore, that this Remedy is destined not only to relieve the human family from malarious diseases, but todo an equally good work by preventing the taking of other mdicinca which do harm.

The entire absence of any baneful ingredient, makes this Remedy not more valuable as a cure, than it is as a preventive.

No class of diseases is so easily managed as the one under consideration, if the medicine be taken in advance. This is owing to the diseases being produced by one and the same cause, and therefore all, both residents and travellers, should protect themselves by the timely use of this preventive, and not wait for the poison already lurking in the veins, to develop it self in a violent attack. Take the cure as a preventive, and so destroy the poison before it does harm.

DIET—Directions for diet are highly important, and must be closely observed. The Diet should be simple, plainly prepared, and in other respects such as the patient has found to agree best with him. If, however he is naturally billious, much meat while in a hot climate, will be found to be decidedly injurious, and a vegetable and highly nutritious diet, far preferable. Those differently constituted, may use a more generous diet. Meat, when eaten, should be tender juicy, and not overdone. The food should be thoroughly masticated, and regular hours for meals observed. Since costiveness or unhealthy looseness of the bowels, is very pernicious during the sickly seasons, the state of the bowels should be closely watched and, if possible, regulated by diet. The patient can in most cases, easily accomplish this most desirable end, by refraining from things which constipate, and taking such diet as loosen the bowels if costive; and so on the contrary if too loose avoid everything of a relaxing nature.

Among other articles of diet, the following possess constipating qualities: common fine wheat bread, more specially that made by 'the baker,' because it too often contains *alum* in its composition; boiled milk; cheese; pepper in any form; salted and smoked meats and fish; and refined sugars; but coarse wheat bread of domestic make; corn bread; corn and rye bread; fresh butter; raw milk; rarely cooked fresh meats, especially venison and pork; raw sugars and molasses, are laxative.

HABITS OF LIFE.—Avoid out door air from the time of sunset until an hour or two after sunrise, for the malaria or miasmata of infested districts, is most abundant and active during the night, a bright sun soon causes it to disappear; Also avoid exposure to damp chilly winds; *over exertion*, irregularity of habits, anxiety of mind, or other like predisposing causes. Sleeping apartments located in the upper stories are much more healthy than those of the first or lower one, because the poisonous air is the heaviest. The system should have all necessary repose.

Some constitutions are able to resist all influences for months or years, while others are prostrated by an ague attack after only a few days exposure. And it generally happens that those cases most speedily produced are the most speedily cured, while those whose constitution have been gradually undermined by the subtle poison lurking in the system for a length of time, require a greater period in which to regain their health.

In most instances there are several days warning given by premonitory symptoms before the disease breaks out. Be sure to heed these, and by commencing the use of this medicine according to directions, you are assured of arresting it in advance, and of being *entirely free from any ague attack* during the whole season. Just compare the *trifling cost* of this article with the immense loss by time consumed by sickness, and observe what an argument the great difference is in favor of using this *certain preventive*

The following directions for using this medicine must be strictly observed.

If the patient is suffering from any form of Intermittent Fever, or Ague it should be taken three times a day, half an hour before each meal, and so continued until the patient feels that a permanent and radical cure is effected. Merely "breaking the chill" is not curing the disease, it is only the commencement. If the patient has been diseased a long time, or for a long time exposed to Malaria, the greater the period required for an effectual cure.—such may require several bottles of this remedy. One or two bottles will suffice for ordinary cases; one bottle will occasionally answer, but cannot always be relied upon for a permanent cure. It will also be prudent to take it once or twice a day, according to the unhealthiness of the locality, until a heavy frost appears, if in a cold or temperate climate; if where frosts do not occur, then it should be taken till some little time after every vestage of the complaint has disappeared.

It will generally be found necessary to precede this medicine by a mild cathartic or anti-billious purgative. The very best thing for general use is a moderate dose of Castor Oil, the object of which is to cleanse the stomach and free the biliary passages. REMEMBER that where this is necessary, or there is costiveness, IT MUST BE TAKEN, or the operation of the antidote will be seriously obstructed.

THE DOSE—The bottle must first be shaken until all the ingredients are thoroughly mixed. The quantity for an adult is a table spoonful. It will be best, however, for ladies or feeble patients to commence with two-thirds the quantity. Any sensation of nausea, or unpleasant feeling at the stomach, is a signal for the dose to be lessened. Most people could take three times the amount without any uncomfortable feelings.

For children above six years of age, about one-half of a table spoonful; and from three to six years, one-third of a table spoonful.

From one to three years, thirty drops; and under one year, ten to fifteen drops, taken clear or in a little water. Much larger quantities, however, than are necessary to expel disease may be taken without any injury.

ONLY CAUTION.—In certain specified cases pour the contents of one or more bottles of the Cure into shallow vessels, (dining plates) and place them in sleeping rooms; for the vapor rising from the medicine, and also the air wafted across, or circulated over the dregs of it, after the liquor is evaporated, will counteract and destroy, to a degree commensurate with its exposure, the miasmata or poison contained in the apartment. This mode of exhibiting the Cure is could likewise be resorted to, when very young infants are exposed to malarious situations.

The bottles in which this medicine is put up have the words "RHODES' FEVER AGD AGUE CURE" blown in the glass, and on the outside wrapper is the name of the medicine, (the copy right of which is secured,) and the signature of the proprietor. These precautions are adopted to prevent counterfeits and imitations.

The *reliance for its success is entirely upon its actual merits* wherever it is introduced and used. These will be considered sufficient.

Prepared and sold by the proprietor,

JAMES A. RHODES, Providence, R.I.

Extract of a Letter from Prof. Fletcher, who was cured while engaged at Brown University, Providence, R. I.

INDIANAPOLIS, IND., March 1, 1855.

JAMES A. RHODES, Esq.,—DEAR SIR:—Yours of the 15th ult. has been received, and I am glad to hear that a medicine so effective is to be introduced into this *aguish* country. I have the greatest confidence in its success, and can reassure you of its happy effect upon me in entirely breaking up the chills, and leaving me strong and healthy.

I like the statement on your wrappers, that you will let the medicine stand on its own merits, and standing thus, I am most sanguine of its success.

I expect to travel over a large portion of our state this Spring, and I shall have abundant opportunity to recommend it verbally.—Wherever I go I shall take great pleasure in thus testifying to its merits, and if you will instruct your agent to let me have a few bottles, I will carry them with me to distribute for your benefit.

In haste, I remain, truly yours,

MILES J. FLETCHER.

Had the Ague for Twelve Years.

PROVIDENCE, June 29, 1855.

Having been informed of the illness of a poor but worthy woman, who has not been free from Fever and Ague a month at a time for the last twelve years, I supplied her gratuitously with Rhodes' Fever and Ague Cure. She took in all four bottles, which completely restored her to health and strength, and as four months has now elapsed, there is no reason to doubt the permanency of the cure.

I am also aware of many other cases in which it has been used, and have never known it to fail,

C. A. MASON, Apothecary.

PINE RUN, Michigan, July 21, 1855.

DR. J. A RHODES—Dear Sir:—Your Cure for the Fever and Ague has thus far performed wonders. It has not failed in one instance to perform a quick and permanent cure. Some who have been troubled with the distressing disease have been entirely cured by using ONE bottle of the CURE. Please send us immediately four dozen, as we have but three bottles remaining.

Truly Yours,

LATHROP & McLEAN.

The following letter shows the good effect of "RHODES' FEVER AND AGUE CURE," and the bad effects of poisonous medicines taken previously, which the lady will probably never get rid of:

SOUTH DURHAM, MASS., Aug. 23, 1856.

DEAR SIR—You wished me to write as to the health of my patient, after taking the medicine you sent, which I now take pleasure in doing.

The patient was my mother. She has lived in Alleghany county, N. Y., for five years, and last fall, for the first time, had the Fever and Ague, which she cured in a short time by the use of * * * * * * Fever and Ague Pills; but last March she came here to live with me, and in May was taken again with it. She has taken the medicine you sent—she took the last some four weeks ago—and she seems to be cured of the disease, and her health is quite good now, but her joints and bones seem to be sore, and pain her some.

The medicine I think is very good, and I could recommend it to ague sufferers, and I would procure it before any other within my knowledge for that disease.

Yours, truly, CLARKES R. KNOWLTON.

PANTEGO, N. C., Aug. 27, 1855.

DR. JAMES A RHODES—Dear Sir—I take pleasure in assuring you of the complete recovery of my daughter from Fever and Ague, of which she has suffered almost without intermission for over five years past, although I had tried various kinds of medicine and treatment.

At my request Mr. Reddick ordered from you two dozen, and I can say that it has not only cured my daughter, who took two bottles, but every one who has used it. This part of the country is very swampy and sickly.

With this Mr. Reddick sends you the monies for three dozen more. Respectfully yours,

JAMES GAYLORD.

LETTER FROM A POSTMASTER.

MAXWELL, Deleware, Co., O., Aug. 19, 1855,

MR. J. A. RHODES—Dear Sir—Your medicine has met with the most favorable success in this neighborhood. I have about five bottles left. I gave it to them at first, "if no cure no pay," although I was not authorized by you to do so; but I took the responsibility on myself. But not a bottle has come back, and as I am almost out of the article, I wish you would forward me one gross of the bottles, if you see proper to do so, and I will be punctual in payment. I inclose fifteen dollars on the medicine I have received for which please send me a receipt. Ship the cure to me as soon as you can—there never has been as much chills and fever, since I lived in the State as at present.

Yours &c.,

RICHARD MARTIN, P. M.

No. 84 SACKET STREET,
South Brooklyn, N. Y.,
Sept. 7, 1855.

DR. J. A RHODES:

Dear Sir:—The wonderful cure your Fever and Ague medicine has effected on me, compells me to say it has acted with miraculous effect. I had been suffering for two months, this summer with the complaint, (which I caught in Pennsylvania last fall) and during my engagement with the "*Ossians Bards*," I was seldom free from it—it weakened me—destroyed my energy—and confused my mind.

During our Eastern tour I enquired for your medicine but could not get it in New Hampshire, Vermont or Maine. After the Bards disbanded I went home, and was again taken sick—the first bottle cured the chills and fever,—although after two doses I was better,—feeling a little feverish, through over exertion by walking in the sun.—I took another dose, and the second bottle has *entirely cured me*,—I am getting robust and well—and it would be ingratitude in me not to inform you of the efficacy of your valuable medicine.

I am constantly travelling in all parts of the United States, in the Concert business, and shall feel much pleased to recommend it to all persons suffering from this distressing complaint.

I sang in Providence, at Howard Hall, in June; but did not then know of your Cure.

If you want a certificate of its efficacy, please write me a line and I will give you one. It may be of some service to you, as I am well known throughout the country; especially in Pennsylvania, Ohio, North Carolina, Illinois, Virginia, &c.

I remain,

Your Grateful Servant.

W. B. HARRISON.

P. S.—I should have said that I took quinine in considerable quantities, which only checked the chills; but your medicine effected a perfect cure.

PROVIDENCE, Ill., Aug. 9, 1855.

DEAR SIR— * * * * * * * I might as well mention here, that every bottle I have heard of being sold, has given good satisfaction. The agents that I have left medicine with say that it ranks among the best of patent medicines, and that after its good qualities once become known, that there will be more of it sold than of any other article of medicine in the State.

Respectfully yours,

JOSEPH SMITH.

FEVER AND AGUE MEDICINE.—In another column of to-days paper will be found an advertisement for "Rhodes Fever and Ague Cure." We are not in the habit of puffing medicines, but desire to say for the benefit of the afflicted, that Wm. N. Rowe, merchant Shaepsburg, who has it for sale, informs us that he has sold several dozen bottles, and in every case it has effected a cure. This proves the medicine to be good, and we take pleasure in bringing it before the notice of the public.—"*Odd Fellow*," *Boonsboro, Md., Sept. 4.*

For sale by Druggists everywhere.

For Sale by HIGBY & DICKINSON, Detroit.

☞ A Harmless Ague Remedy is a Public Benefaction.—See what the President of the Pharmaceutical Society of Missouri says of Rhodes' Fever and Ague Cure, or Antidote to Malaria:

ST. LOUIS, Mo., Nov. 10, 1855.

Having noticed the certificate of chemical analysis given by the celebrated chemist, Dr. J. R. Chilton, of New York City, in favor of Rhodes' Fever and Ague Cure, that it contained neither Quinine, Arsenic, Mercury, or Strychnine, and receiving numerous applications for it, I was induced to send to Mr. Rhodes for the medicine. Since then I have disposed of a large quantity, mostly to residents of this city, who have invariably been cured by it, and to whom I can refer. I am, therefore, satisfied in recommending it to be all that the proprietor represents. EDWARD S. WHEATON.

Agents in Detroit, GEO. B. DICKINSON & CO., and sold Druggists generally throughout the United States, Canadas, &c.

JAMES A. RHODES, Proprietor, Providence, R. I. jan'56.tf

ALBANY AGRICULTURAL WORKS!

ON HAMILTON, LIBERTY AND UNION STREETS,

Warehouse, Seed Store and Sales Room 52 State St.,

ALBANY, · N. Y.

EMERY BROTHERS,

SOLE PROPRIETORS AAD MANUFACTURERS OF

Emery's Patent Railroad Horse Powers and overshot Threshing Machines & Separators,

ALSO MANUFACTURERS OF AND WHOLESALE DEALERS IN

AGRICULTURAL MACHINES AND IMPLEMENTS,

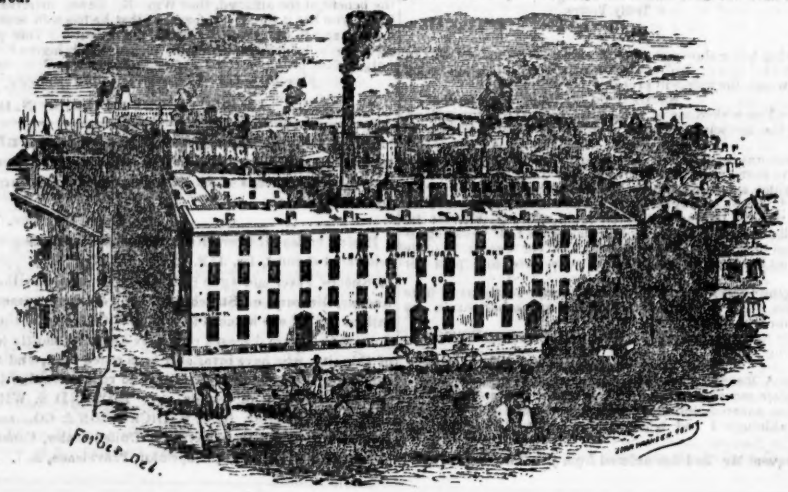
OF THE LATEST AND MOST IMPROVED KINDS EXTANT.

Dealers in Grain, Field, Grass, Garden and Flower Seeds, and Fertilizers.

THE Horse Powers, together with the great variety of Labor-saving Machines, to be propelled thereby, being the leading articles manufactured by the proprietors, the attention of the public is especially called to them. Full descriptive illustrated Catalogues containing directions, prices and terms of sale, warranty and payment, sent by mail, gratis, to all post-paid applications.

Upwards of twelve hundred sets of the above celebrated machines, have been made and sold in this city alone during the last twelve months, and without supplying the demand. The public may rest assured the reputation heretofore earned for their manufactures, shall be fully sustained, by using none but the best material and workmanship; and by a strict attention to business, they hope to merit and enjoy a continuance of the patronage heretofore so liberally bestowed.

Warranty, Capacity, Economy, &c.

The Two Horse Power and Thresher, as represented by circulars, is capable with three or four men, of threshing from 175 to 225 bushels of wheat or rye, and the One Horse Power from 75 to 125 bushels of wheat or rye; or both kinds of powers, &c., are capable of threshing double that amount of oats, barley, buckwheat per day, of ordinary fair yield.

These Power threshers, &c., are warranted to be of the best material and workmanship, and to operate as represented by this circular, to the satisfaction of the purchasers, together with a full right of using them in any territory of the United States, subject to be returned within three months and home transportation and full purchase money refunded, if not found acceptable to the purchaser.